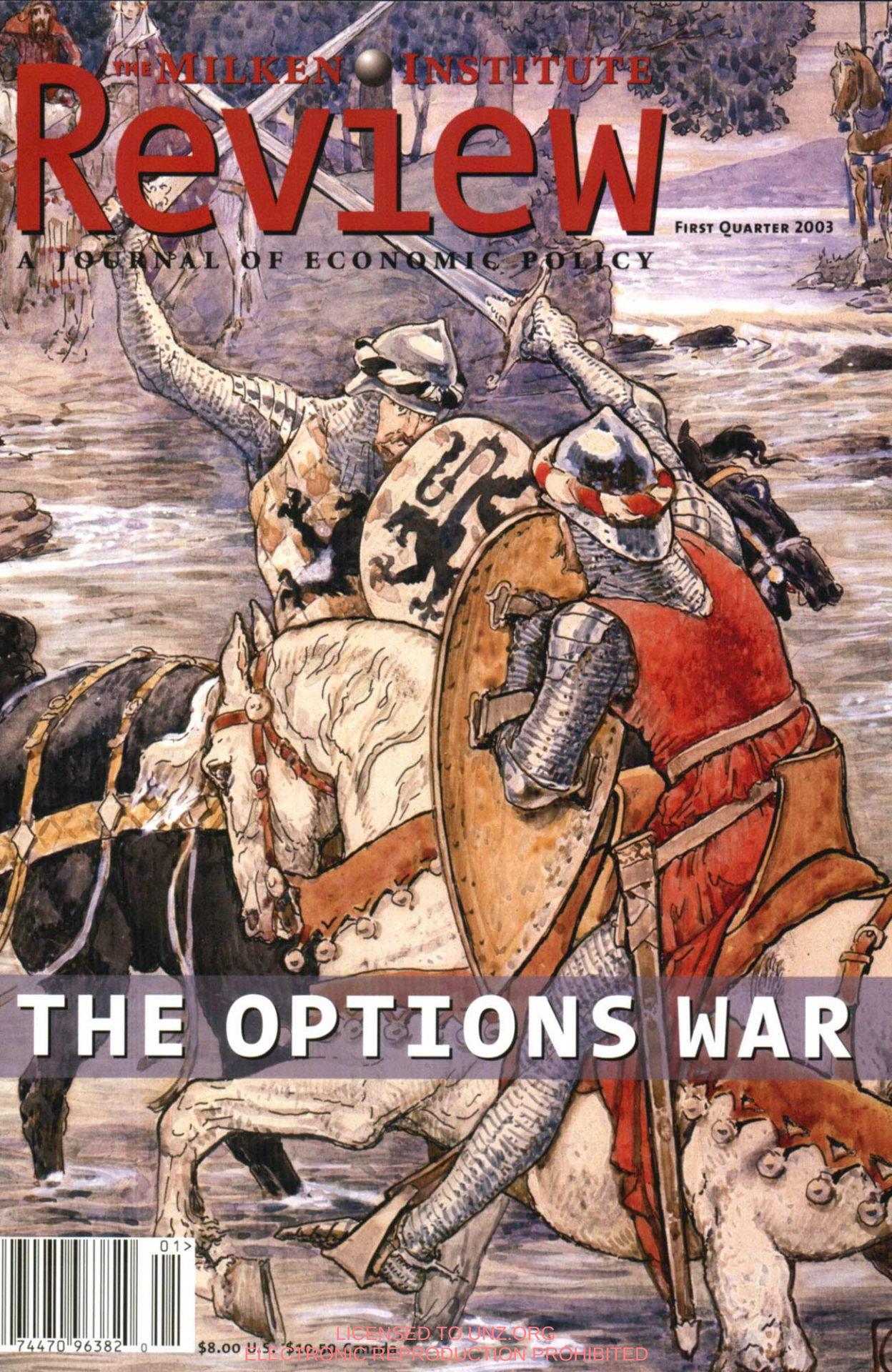


THE MILKEN • INSTITUTE

Review

FIRST QUARTER 2003

A JOURNAL OF ECONOMIC POLICY



THE OPTIONS WAR



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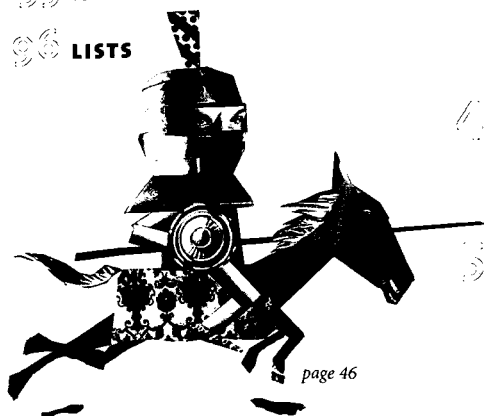
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One of the perks in working at the Milken Institute is the chance to read, listen to and put in my two cents' worth on the staff's great research. For those of you who don't have an office on the second

floor of 1250 Fourth Street, however, we try to make things as easy as possible for you to enjoy the same benefits.

This spring, for instance, we will hold our annual Global Conference – an event that puts you right in the middle of some of the most intriguing debates about where the world is headed. If you've never been to the Milken Global Conference, do yourself a favor. It's an experience like no other, with some 150 panelists and more than 1,500 attendees, making it the largest economic conference in North America. You will not only learn a remarkable amount in a few short days, you'll have a chance to meet people in the thick of the debates over issues that affect us all.

The 6th annual Global Conference is scheduled for March 31-April 2, 2003, in Los Angeles. Details about speakers, sessions and registration are available at www.milkeninstitute.org/gc2003.

To entice you further, I would like to extend a special offer to *Milken Institute Review* subscribers. As you may remember from my letter in the last issue, we are moving the *Review* from free to paid subscriptions. If you buy a two-year subscription for only \$58, we will give you a \$500 discount off the regular Global Conference registration fee of \$1,995.

All you have to do is register online by March 3 and fill in the code, MIR2003GC, to receive the \$1,495 fee and \$58 subscription (\$1,553 total).

Another way we share our research with you is through our Web site (www.milkeninstitute.org). We recently completed a major redesign of the site, which will make your visit there much more enjoyable. You can now review all of our research, events and projects more easily. Do take a few minutes and let your fingers do the walking.

Finally, of course, we have the *Review*, which consistently includes leading-edge thinking about economic policy – including some of our own. In this issue, you'll read about a key area for future economic growth – what we call Emerging Domestic Markets – by our own Glenn Yago and Betsy Zeidman (page 88). And this issue's book excerpt comes from *Clusters of Creativity*, by Rob Koepp, a research fellow at the Institute (page 65).

I hope you enjoy our latest offerings. It's all part of the Institute's effort to reach out and share our ideas with you. To help support our work, I urge you to become involved as a member of the newly formed Milken Institute Associates. For more information about the program, please see our Web site or contact us at 310-570-4600.

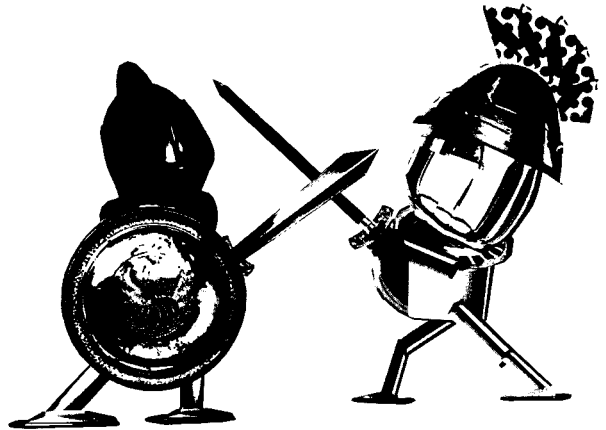
Michael Klown
President and CEO

I know, I know. It's tough to wait three whole months between issues of the *Milken Institute Review*. There's always the option of rereading your favorite articles from previous issues, but it just isn't the same. In any event, your patience is about to be rewarded with some neat pieces.

Ricardo Bayon, a fellow at the New America Foundation, is back with the latest on shareholder activism – with a twist. “When most people think of campaigns for social causes, they think of organizations like Greenpeace and Amnesty International,” Bayon writes. “But in the post-Enron, post-Tyco world, the most effective campaigners may well prove to be big institutional investors – mutual funds and pension funds.”

Gary Hufbauer, a senior fellow at the Institute for International Economics in Washington, takes a hard look at the numbers behind the global polarization debate, and decides that the world's poor aren't about to go away. “Differences between haves and have-nots may not be widening,” he concedes. “But grievances certainly sharpen as the have-nots come to see the comparative wretchedness of their lives.”

If that is indeed the case, Hufbauer suggests, it makes a lot of sense to anticipate the consequences and contain the damage. “Living with polarization means intervening against the most dangerous and appalling manifestations, as seen from the rich-country side of the divide. It means Jacksonian intervention with a humanitarian edge. It does not portend a muscular Wilsonian foreign policy



– a Marshall Plan and nation building for the numerous strugglers and losers in the world community.”

Jim DeLong, director of the Center for the Study of Digital Property at the Progress & Freedom Foundation in Washington, takes aim at the conventional wisdom on the need to reform the way public companies account for employee stock options in financial reports. “The options issue actually ties into profound questions about the nature of capital and the structure of business enterprises in the 21st century,” he argues. “It embodies serious conflicts between the generators of intellectual capital allied with their gunslinging venture finance allies on the one hand and the

EDITOR'S NOTE

conventional providers of financial capital on the other.”

“The expense-or-not issue is of modest importance in itself,” he adds. “But it has considerable potential to cause problems in the future – especially with taxing and regulatory authorities that are hostile to new forms of business organization.”

Jeffrey Frankel, a professor at Harvard’s Kennedy School who was a member of President Clinton’s economic team, muses about the Republican-Democrat role reversal. “The Republicans, so long identified with free markets and less-is-more government, have become the party of fiscal profligacy and market intervention,” he points out, while “Democratic presidents have (by comparison) become the agents of fiscal responsibility and conservative microeconomic policies.”

“Perhaps an explanation stems precisely from the fact that Democrats remain saddled with the big-government image,” he writes. “Hence they believe they can’t elect a president unless they bend over backwards on the associated issues. The public seems willing, however, to accept Republican presidents who believe that it is enough to talk the talk without walking the walk.”

Larry Kotlikoff, chair of the economics department at Boston University, offers an explanation for why high-speed Internet connections have yet to reach the average computer user, along with a technical fix for breaking the political and economic logjam.

“There is finally a way to stimulate the expansion of broadband without undermining local phone competition, one that would put the Baby Bells and emerging rivals on an equal playing field while minimizing the need for the Baby Bells to provide services to their rivals,” Kotlikoff says. “The solution involves using next-generation technology to achieve

for broadband and local phone service what was done years ago for long distance service, namely to establish electronic switching between providers.”

What’s left to be said about the fallout from the scandals at Enron, Tyco, WorldCom, etc? Actually, quite a bit. **Carol Graham**, **Robert Litan** and **Sandip Sukhtankar** of the Brookings Institution make the leap from Wall Street to main street, and translate the impact of the loss of confidence in public securities markets into the cost of lost production of goods and services.

“The best guess is that the crisis in corporate governance will exact sizable costs on the economy,” they write. “A negative impact on GDP of 0.36 percent translates into a first-year loss of \$38 billion – which is roughly what the federal government is now spending annually on homeland security.” Note, too, that “while the brunt of the wealth loss was borne by the rich, everyone else will pay a price in lost retirement savings and slower growth in living standards – at least until investor confidence in the quality of corporate numbers is fully restored.”

Yes, there’s even more. **Martin Hutchinson**, United Press International’s business and economics editor, decides that Robert Prechter’s alarmist view of the stock market may be more credible than economists like to think. **Glenn Yago** and **Betsy Zeidman** of the Milken Institute make the case for building a solid foundation for what they call “emerging domestic markets” to bring minorities into the mainstream. And last but hardly least, we’re proud to publish an excerpt from *Clusters of Creativity*, the new book by Milken Institute research fellow **Rob Koepp**. The book’s subtitle, *Enduring Lessons on Innovation and Entrepreneurship from Silicon Valley and Europe’s Silicon Fen*, says it all.

— Peter Passell

The past issue

of the *Review* included an excerpt from Alison Wolf's book, *Does Education Matter?*, as well as a rebuttal by University of California economist David Card. Here, Wolf replies to Card.

— Peter Passell

Reading David Card, you would think I had claimed that the more educated get better jobs for no reason other than their paper credentials. I don't believe any such thing – but I do argue that rates of return are a poor basis for deciding what more education will do for society. Card apparently believes that the wage premium of the educated is largely a reflection of their productivity, and that you can, therefore, make that “short leap” from finding that college graduates earn 40 percent more, to predicting that “an added college graduate adds 40 percent more to national income than an added high school graduate.”

This is what many politicians believe, but is a more extreme view than most rate-of-return specialists would espouse. They tend to emphasize that rates of return will vary depending on when you enter the labor market, and that different returns to different degrees may reflect the tastes and ambitions of students, as much as differences in curricula.

Card devoted considerable space to the effects of raising the school-leaving age in England from 15 to 16. At the time the school-leaving age was raised, there were two national examinations that pupils could take at age 16: high-status “O levels” and lower-status CSEs. At age 14, pupils were placed in tracks. One leads to O level (delivering an average 25



percent wage premium compared to no qualifications) and one to CSE (with a 10 percent wage premium). Pupils studied similar subjects, but CSE content was less academic.

Raising the school-leaving age had an immediate, one-time effect on the numbers taking CSEs because many young people in the CSE stream took the exams rather than leaving before the examination date. Those who then left with no examination passes, but with more time in education than the previous cohort, got no return on extra schooling. Those who left having passed some CSEs gained as much benefit from them as prior

REBUTTAL

cohorts, where fewer people held CSEs. There was no immediate upsurge in the numbers taking O level – how could there be, since the schools controlled entry to the examination and had staffing, class allocation and pass rates to protect? Six years later, however, the gap between the proportions taking O level and CSE was back to its previous level.

I read this evidence as consistent with the hypothesis that education both imparts valuable skills and screens students for better-paying jobs – which is how most of us (notably employers) view the education system when making hiring decisions. In which case, why worry? Because we have an increasingly distorted view of education as justified only by its service to the economy.

Politicians are seduced into believing that quantity, not quality, matters – that twice the number of college graduates, at half the spending per student, would be a good thing. The growth of education also creates new inequities. In the UK, we have data over time on people born in 1958 and 1970. The adult income of the 1970-born is more closely associated with their parents' incomes than was the case for the 1958-born. The explanation seems to be the growing importance of higher education in determining life chances.

All Western societies are marked by grossly unequal access not just to college, but to different sorts of college. Bright but poor 18-year-olds are much less likely to attend elite schools than bright, rich ones – the latter then earn more because of where they went to college. Is that really just because elite schools raised their productivity more?

I don't think anyone who knows developing countries doubts that education can be a sterile rat-race. Worse, the belief that education can deliver growth offers an easy way of avoiding our own obligations. A few months

ago, the *Financial Times* had an article by Britain's Chancellor of the Exchequer and central bank governor arguing that the West needed to help the developing world by funding more education. In fact, what it really needs is access to protected agricultural markets.

People don't need persuading that education is a route to success, but more literacy programs won't give them money to buy books. If the farm products, the main exports of the world's poorest economies, are barred from our markets or undercut by our subsidies, the main prize for education will remain a sinecure in a government bureaucracy.

I am most puzzled by Card's belief that education increases productivity while questioning whether this has anything to do with English and math skills. What else could formal education be doing that makes people more productive?

There is, in fact, growing evidence that high-school math and English are increasingly important in the workplace. Some is from qualitative research and some from the econometric analyses that economists prefer.

Nor can the results be linked to rewards for formal certification. These are actual skills for which there is growing demand. The risk of pursuing endless expansion in years of schooling is not simply that it pulls resources away from health or pensions, but that it reduces real spending – above all, in the quality of teachers – for core education.

In the decades after World War II, governments believed that you could never have too much investment and they worried about statistics showing higher investment abroad (e.g., Russia, Japan). But the fact that investment is necessary does not mean that any increase must be good. Few people today believe tractor factories are magic bullets. It's time for comparable realism about education.

— Alison Wolf

As many of our readers have already noted, the editing in the last issue of the *Review* was a bit ragged.* Two flat-out corrections and, in a third case, some weasel words, are in order.

1. We butchered the Milken Institute's mission statement, which was included in President's Mike Klowden's letter to readers. Here's the real thing (right):

2. David Hale is the global chief economist for the Zurich Group and a really cool guy. He is not, however, the author of the Trends column in the last issue of the *Review*. That worthy essay on high-tech scammers was written by Marcus Noland, a senior fellow at the Institute for International Economics in Washington.

3. Reader Christopher Weil, of Christopher Weil & Company in San Diego, was unhappy with the reference to Piotr Kropotkin in the article by Jennifer Bremer and John Kasarda entitled "Origins of Terror." Was it wrong to compare Prince Kropotkin, a 19th century anarchist intellectual, to the current crop of Islamic fundamentalist terrorists?

It depends on what we're comparing. Like many of the leaders of Al Qaeda, Kropotkin was well educated, grew up in luxury and

THE MILKEN INSTITUTE MISSION STATEMENT

The Milken Institute is an independent economic think tank. Our mission is to improve the lives and economic conditions of diverse populations in the U.S. and around the world by helping business and public policy leaders identify and implement innovative ideas for creating broad-based prosperity.

We put research to work with the goal of revitalizing regions and finding new ways to generate capital for people with original ideas. We do this by focusing on:

- **Human capital** – the talent, knowledge and experience of people, and their value to organizations, economies and society;
- **Financial capital** – innovations that allocate financial resources efficiently, especially to those who ordinarily would not have access to it, but who can best use it to build companies, create jobs and solve long-standing social and economic problems; and
- **Social capital** – the bonds of society, including schools, health care, cultural institutions and government services, that underlie economic advancement.

We use our research to generate results-oriented policy ideas and recommendations. We exchange ideas and solutions with experts around the world and help decision makers better understand how to use market-based solutions on a wide range of issues, from finance and economic development to the environment and medical research.

We hold educational roundtables, forums, seminars and conferences, and publish our research findings and conference outcomes.

By creating ways to spread the benefits of human, financial and social capital to as many people as possible – the democratization of capital – we hope to contribute to prosperity and freedom in all corners of the globe.

We are nonprofit, nonpartisan and publicly supported.

advocated the overthrow of a government he viewed as unjust. But he was certainly not an authoritarian, and he explicitly disapproved of the use of terror to achieve revolutionary ends. Indeed, while he ended his days in Lenin's Russia, he made no secret of his dismay over the course of the Bolshevik revolution.

— Peter Passell

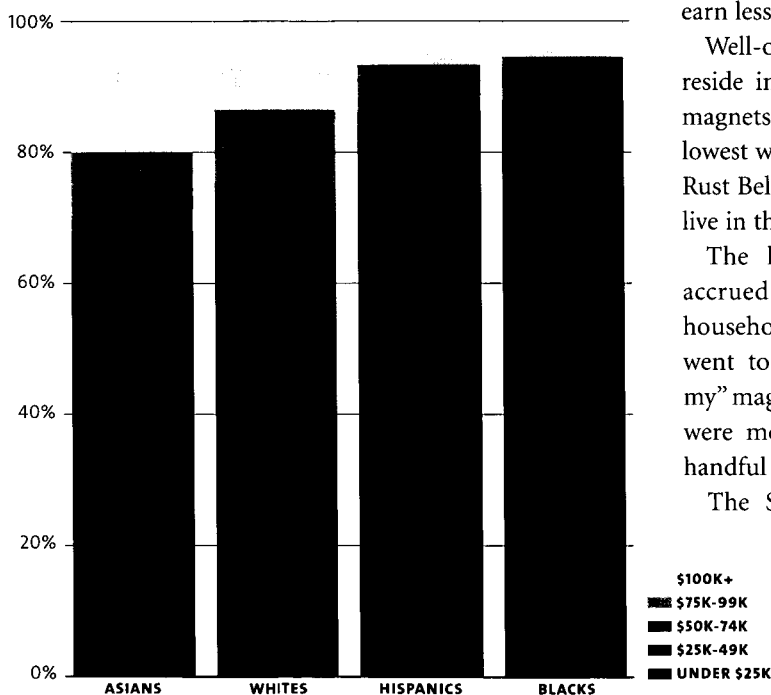
**Who knew they put vodka in bloody marys?*

BY WILLIAM H. FREY

Whites and “model minority”

Asians are generally assumed to be richer than blacks and Hispanics. Yet this stereotype overlooks the steady rise of African-American professionals and the upward mobility of immigrant Latinos. By the same token, not all Asians became wealthy from the dot-com boom, and the go-go 1990s left many a white household behind.

RACIAL DIVIDES: HOUSEHOLD INCOME PROFILES
ANNUAL HOUSEHOLD INCOME FOR 1999, REPORTED IN CENSUS 2000



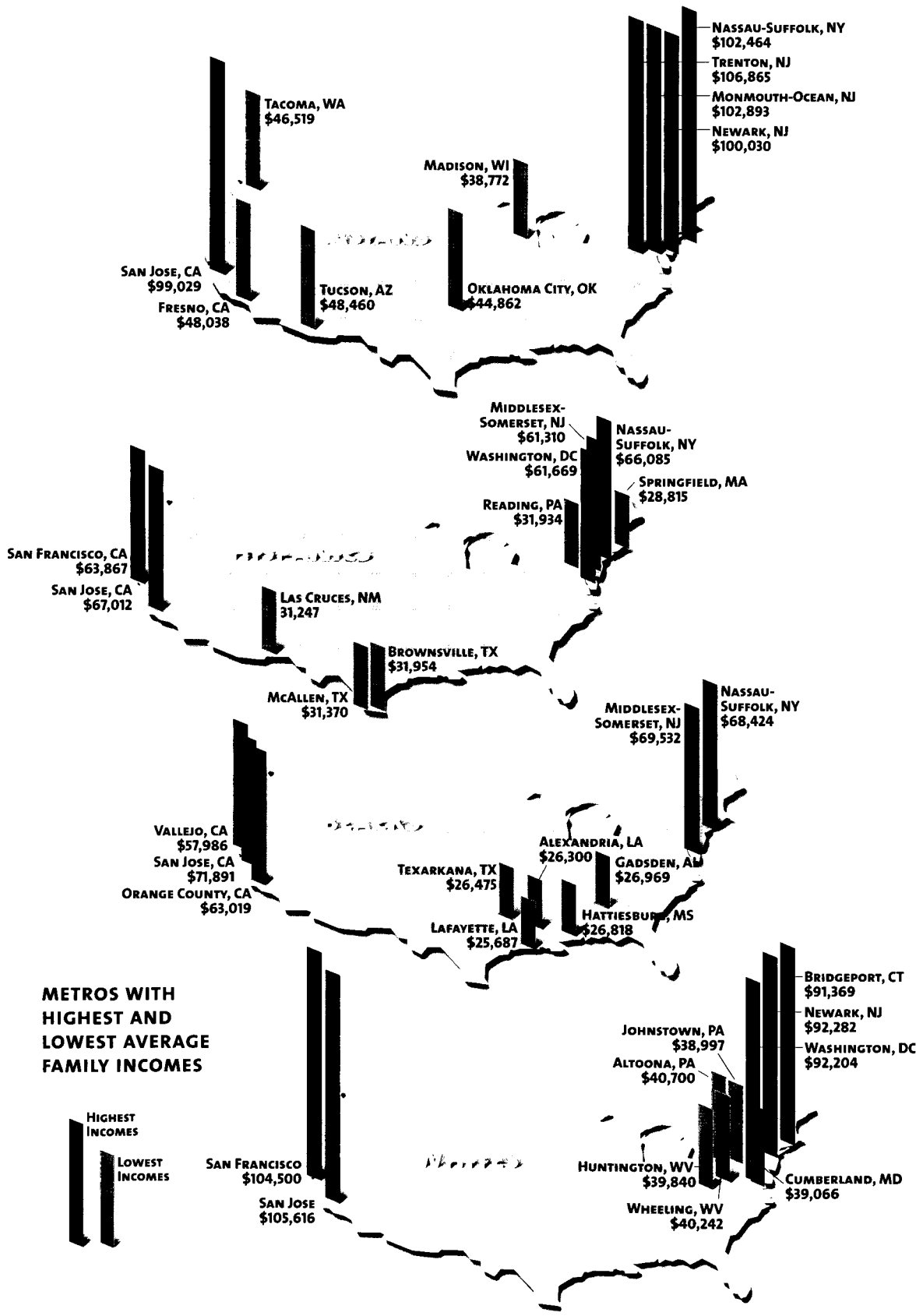
Whites' average household income (\$61,000) still far outpaces that of blacks (\$40,000), but the distributions greatly overlap. Some 12 percent of black households

earn more than \$75,000, while more than a quarter of white households earn less than \$25,000.

Well-off whites and blacks typically reside in coastal metros that are not magnets for migrants. Places with the lowest white incomes are largely in the Rust Belt, whereas poor blacks tend to live in the Deep South.

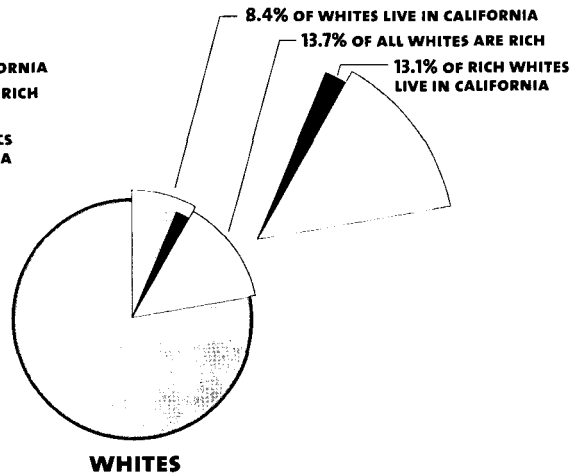
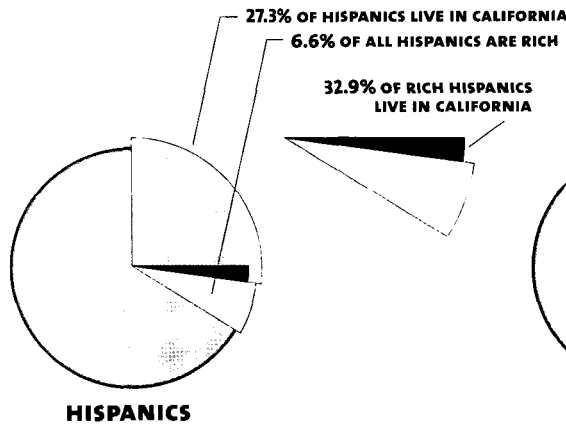
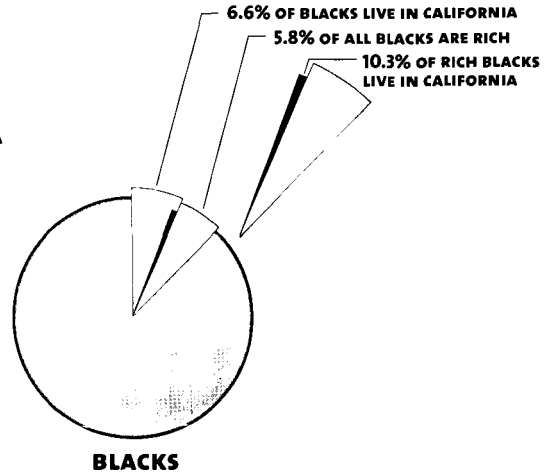
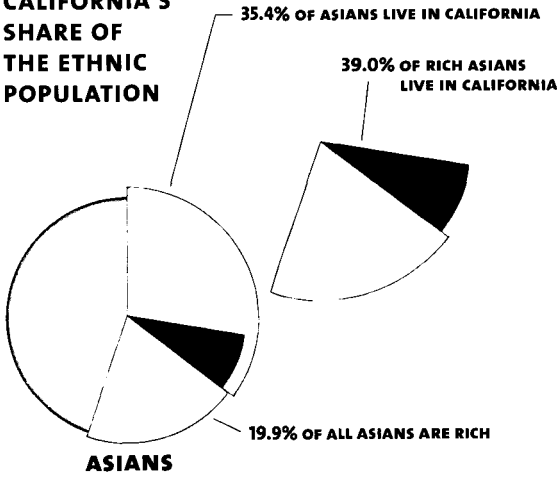
The largest 1990s income gains accrued to metros attracting new households. For whites, these gains went to Western “knowledge economy” magnets, while black income gains were most notable in Atlanta and a handful of Texas cities.

The San Francisco Bay area and greater Gotham are home to a lot of affluent Hispanics and Asians. The low-income maps are quite different for each group, though. The umbrella Hispanic category includes significant shares of Puerto Ricans in low-income metros like Springfield, Reading and Buffalo. Low income Asians are dispersed across the West.



CHARTICLE

CALIFORNIA'S SHARE OF THE ETHNIC POPULATION



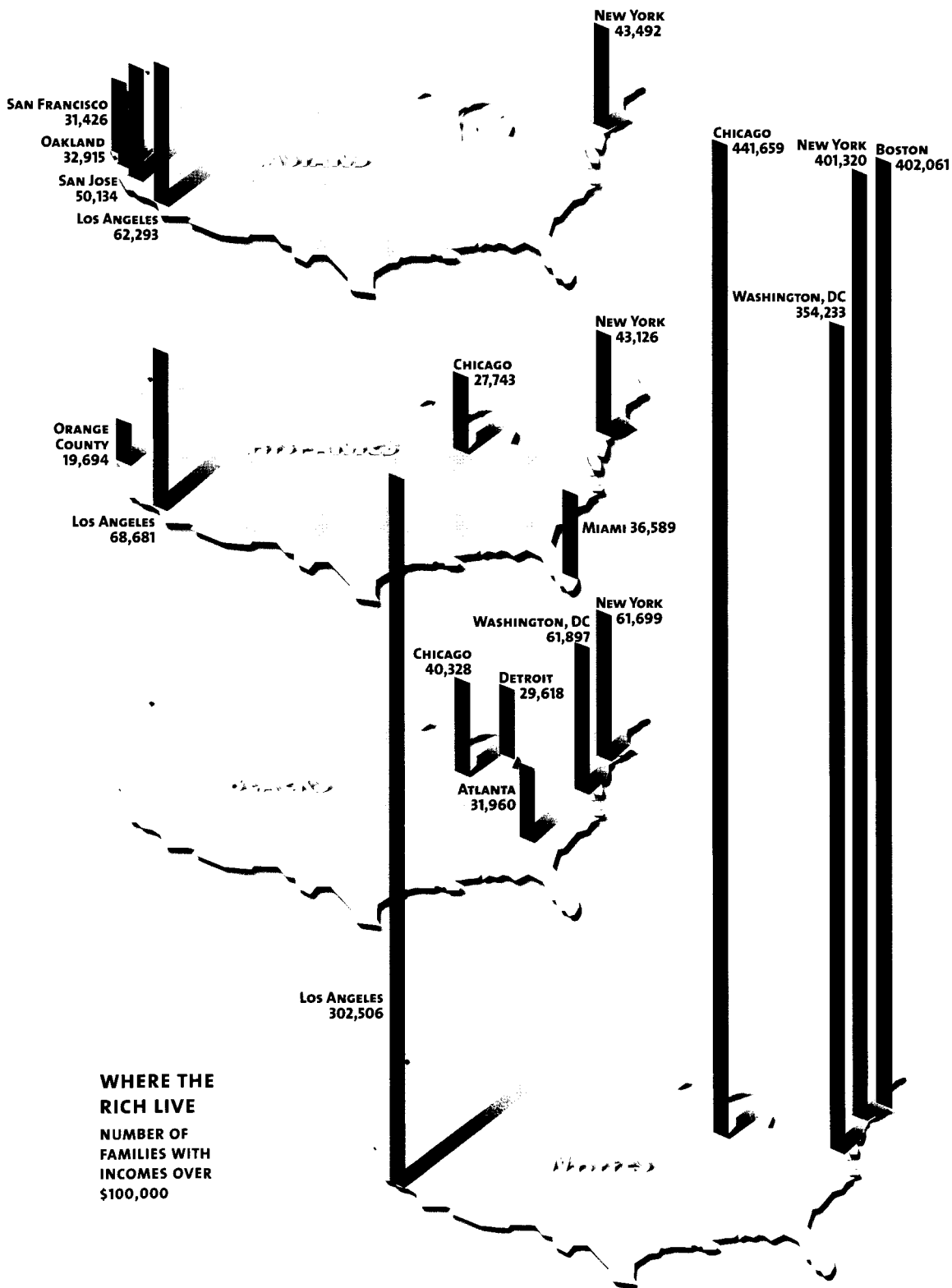
Metros with greatest changes in income levels reflect the migration patterns of Hispanics and Asians within the US. The largest Asian income gains occurred in New Economy magnets like Austin, Raleigh-Durham and Dallas. Areas with the greatest Hispanic income declines include mid-South cities that attract low-skilled Latinos.

The vast majority (84 percent) of \$100K-plus households are white. But in metro New

York and Los Angeles, nonwhite minorities comprise 28 percent and 36 percent of high-income households, respectively. So, it should not be surprising that Chicago and Boston each have more white \$100K households than either of the biggest two melting-pot metros.

Fully one-third of all \$100K black households are in DC, New York, Chicago, Atlanta and Detroit. California is home to a far larger share of Asian and Hispanic households than any other, and its hold is especially strong among those making \$100K. The Golden State, indeed. 

BILL FREY is a senior fellow in demography at the Milken Institute.



BY RICARDO BAYON

When most people think about campaigns for social causes they think of organizations like Greenpeace and Amnesty International. But in the post-Enron, post-Tyco world, the most effective campaigners may well prove to be big institutional investors – mutual funds and pension funds.

Not only do they have the money, but a reach and influence that traditional do-gooders can only dream about. When they talk, governments and corporations must listen. And, thanks in no small measure to the market scandals of the past two years, a number of these institutions – notably the managers of public pension funds and managers of indexed mutual funds, which now hold a substantial portion of traded securities – are broadening their interests to encompass social and environmental issues.

Last year, shareholder resolutions that were not directly aimed at the bottom line received unprecedented levels of support – particularly from large institutional investors and pension funds. “The 2002 season was quite remarkable,” says Meg Voorhes, director of the social issues service at the Investor Responsibility Research Center (IRRC), which monitors shareholder voting.

Social and environmental shareholder proposals got more than twice as much support as they have in the past. Before this year, Voorhes explains, it was rare for such proposals to garner as much as 15 percent of the

vote. This year, 15 percent was a very modest showing.

Consider a resolution before Idacorp, the holding company for Idaho Power, asking management to review the re-licensing process for one of its hydroelectric plants. The proposal, which was sponsored by Trillium Asset Management, cited environmental factors as a major reason for the review – hardly the traditional stuff of shareholder concern. Yet the ballot question got 34 percent of the vote.

Likewise, a resolution asking oil-giant Unocal to support the core conventions of the International Labor Organization (ILO) did surprisingly well, with 33 percent of the vote. The proposal was put forward by the Long-View Fund, a union-backed investment fund, and was motivated by Unocal’s extensive operations in Myanmar – a country where human rights abuses are rife.

But “the real story of the season,” says Michelle Chan-Fishell, director of the green investments program at Friends of the Earth, is the popularity of shareholder resolutions targeting the climate-change issue.

In 2002, shareholder filed 19 significant resolutions dealing with greenhouse gases. Of these, only seven made it to a vote because

RICARDO BAYON is a fellow at the New America Foundation.

management preferred to negotiate compromises outside the public eye. And of the seven, five got more than 15 percent of the vote, with resolutions at Eastman Chemical and American Standard getting a remarkable 30 percent and 27 percent, respectively. Compare that to 2001, when only six proposals on climate change were filed and these got an average of just 7 percent of the vote.

Some of the credit for the gain should probably go to the drafters of the proposals. The language “used to be quite broad and speculative,” explains Voorhes, “but they are becoming better focused. This year they were mostly asking for reports on emissions.”

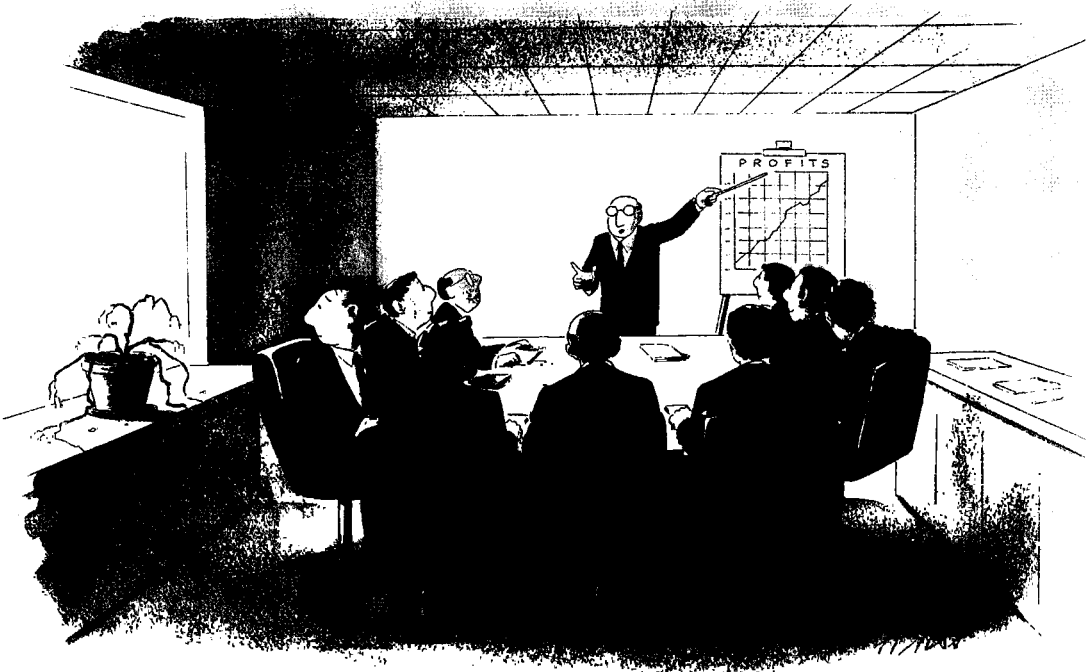
Just as important, says Chan-Fishell, is the fact that Institutional Shareholder Services (ISS), a leading provider of proxy voting recommendations to the investment world, has changed its views on some of these issues. “Of course,” she reminds, “it could just be that this year, as a result of Enron, shareholders are

actually reading their proxies and no longer voting blindly with management.”

SHAREHOLDERS AS SOCIAL ACTIVISTS

Though Enron woke up a lot of individual investors, the real muscle is coming from large institutional investors that count shares by the millions – in particular, the state employee pension funds. This year, for example, Connecticut’s retirement plan (with some \$20 billion in assets) became the first to file resolutions asking companies to report on their emissions of greenhouse gases.

Donald Kirshbaum, investment policy officer in the Connecticut state treasurer’s office and the person responsible for making proxy decisions for the state’s pension funds, is all in favor. “It makes perfect sense,” he notes. “Pension funds are long-term investors, and these complex issues tend to impact a company’s financial performance in the long-term.” Besides, he adds, Connecticut law



HARRY BLISS

TRENDS

requires the state treasurer to weigh the social, economic and environmental implications of investments. With so clear a mandate, Kirshbaum says, his state will continue to push companies on the issue of climate change.

In addition to the Connecticut retirement plan, a number of other large public pension funds played a role in driving the 2002 social and environmental resolutions. For example, the pension funds of New York City (with some \$80 billion in assets) last year filed and/or supported resolutions on ILO standards, renewable energy and climate change.

Ken Sylvester, director of pension policy for the New York City Comptroller, echoes the view that corporate social virtue serves his clients' long term interests. "We see it as our fiduciary duty to get companies to behave more responsibly," he emphasizes. In the years to come, Sylvester says, his office is going to focus on ensuring that the companies in its investment portfolio publish strong social and environmental reports – preferably using the guidelines prepared by the Global Reporting Initiative (GRI), a nonprofit group based in the Netherlands.

Although it did not sponsor any social resolutions in 2002, New York State's Common Retirement Fund (with a whopping \$112 billion in assets) did keep a hand in. State Comptroller Carl McCall supported some of the most successful social resolutions, including a request for the financial services company, Household International, to link executive pay to measures that prevent predatory lending.

According to IRRC, a well-publicized comment by McCall indicating that the state's retirement funds might sell their 2.5 million shares in Household if the company didn't address this problem helped the resolution achieve 27 percent of the vote. The Minnesota State Board of Investment is apparently also

backing the initiative at Household.

But the fund to watch, the undisputed trendsetter on social and environmental issues, is the California Public Employees' Retirement System (Calpers). Not only is Calpers one of the largest pension funds in the world (with close to \$150 billion in assets), it has long been a leader on corporate governance issues as well as social issues.

Chan-Fishell speculates that social activism is getting a boost because other funds are watching the policy shifts at Calpers. She cites a recent decision by the pension fund giant to factor social and human rights criteria into investment decisions in emerging markets, as well as an earlier announcement indicating that Calpers would vote its shares in favor of solid social and environmental resolutions unless it could be shown that a resolution would impair the company's financial performance. Previously, Calpers had placed the burden of proof on the filers of a resolution, asking them to show that it wouldn't hurt the company's bottom line.

Although the burden-of-proof reversal has fundamentally changed the way the pension fund votes its shares, Calpers' emerging markets decision has received the more publicity – and more criticism.

The emerging markets initiative operates on two tracks. At the country level, it requires Calpers to consider factors such as human rights violations, support for ILO standards, the existence of a free press, and the strength of a country's democratic institutions in preparing its lists of "permissible" and "prohibited" countries for investment. As a result, Calpers has announced that it will divest from Indonesia, Malaysia and Thailand, and begin to invest in Hungary and Poland. At the company level, Calpers will move from being a passive investor to an active one, with its managers considering social issues when

making investments.

A key person behind the emerging markets reforms (as well as many of the other significant social/environmental changes at Calpers) is Philip Angelides, California's state treasurer. Angelides defends these decisions on economic grounds. "I wouldn't characterize what we are doing as 'socially responsible' investing," he says. "I would characterize it as 'smart' investing. We are trying to improve

to grow. "Most large institutional investors are now index investors, which means they own the whole economy," explains Williams. "They will have a tendency to be more concerned with the overall health of the entire market than they are with how any one single investment is performing."

"Institutional investors are going to increasingly have to monitor their portfolios for interactions and for what traditional

Institutional investors are going to increasingly have to monitor their portfolios for interactions and for what traditional economists call externalities.

our long-term performance, period."

Angelides says there is an extensive body of literature showing a strong correlation between openness, democracy, political stability, workplace protections, labor rights, freedom of the press and sustainable environmental practices on the one hand, and a country's long-term economic growth on the other. "Besides," he adds, "given the abysmal returns in foreign emerging markets, I just thought it was time for Calpers to look again at the standards and criteria used to judge investments in those markets."

Angelides would also apply similar principles to corporations in the United States. He argues that socially responsible companies in the end do better financially. "Since pension funds are long-term investors," he concludes, "we wouldn't be living up to our fiduciary responsibilities if we *didn't* look at some of these broader social and environmental issues."

James Hawley and Andrew Williams, professors of business at St. Mary's College in California and the authors of *The Rise of Fiduciary Capitalism*, predict this trend is likely

economists call externalities," adds Hawley. "They will have to worry about how one company's actions on education, training, pollution or the environment benefit or damage all the other companies whose shares they own."

If Hawley and Williams are right, why aren't other large institutional investors behaving like Calpers? Why is it only the public pension funds taking the lead?

Michael Flaherman, chair of the investment committee of the Calpers Board, thinks this omission is driven by conflicts of interest. "Corporate pension funds and university endowments," he explains, "shy away from public criticism of companies because they have to manage a series of relationships: with their peers, customers, suppliers, donors and others. Mutual funds, on the other hand, gather assets by managing 401(k) plans, so they, too, have some huge, ingrained conflicts of interest."

Nell Minow, the editor of the Corporate Library, an online repository of research on corporate governance, puts it more succinctly: "Private and corporate pension funds think like corporations, whereas public pen-

TRENDS

sion funds think like politicians.”

The one exception to this rule is TIAA-CREF. Ever since the big college teachers pension fund was created, it has been active on social, environmental and governance issues. Ken Bertsch, TIAA-CREF’s director of corporate governance, thinks it has to do with the company’s original constituency, which largely consisted of progressive academics. “Additionally,” he says, “we became large early on, and mostly indexed in the early ’80s, so we were forced to care. It also helps that in past we haven’t had to compete heavily for 401(k) money, so we have fewer conflicts of interest than many other money managers.”

This issue of conflicts of interest among money managers is itself becoming a subject of activism. In July 2002, New York’s McCall and California’s Angelides joined forces with North Carolina Treasurer Richard Moore (sole trustee of the state’s public pension fund with some \$60 billion in assets) and New York Attorney General Eliot Spitzer to call on investment banks to comply with a series of “Investment Protection Principles” that essentially mirrored the agreements undertaken by Merrill Lynch following a well-publicized suit brought against the company by Spitzer’s office. The principles require, among other things, that banks:

- sever the link between compensation for analysts and investment banking.
- prohibit investment banking input into analyst compensation.
- create a review committee to approve all research recommendations.
- require that upon discontinuation of research coverage of a company, firms disclose the coverage termination and the rationale for such termination.
- disclose in research reports whether the firm has received or is entitled to receive any

compensation from a covered company over the past 12 months.

- establish a monitoring process to ensure compliance with the principles.

The state treasurers also threatened to cut off all state business with banks that refused to comply.

Angelides, McCall, Moore and Spitzer followed this announcement with a meeting last August of financial leaders from 17 states and the District of Columbia (who together manage more than \$1 trillion in assets) with the goal of coordinating activism on corporate governance. The treasurers not only endorsed the principles put forward by Angelides, McCall, Moore and Spitzer, but said that the states would crack down on companies that register off-shore “in name alone” to avoid paying U.S. taxes. This “egregious conduct,” they said, not only robbed America of taxes, but also served to “weaken shareholder protection.”

After the August meeting, both Calpers and the California State Teachers Retirement System (CalSTRS, the third largest pension fund in the country) also agreed to help uphold the principles put forward by the state treasurers. Together, this amounts to hundreds of billions of dollars worth of pressure on investment banks. Then, in October, Angelides announced that his office would no longer do business with one bank, HSBC Securities, because it had failed to comply with the principles. He further said that relationships with 22 other banks were under close review. It was the first time that an investment bank had been barred from working with a state for failing to meet corporate governance standards.

The state treasurers have pretty solid support for their initiatives on corporate governance. John Bogle, the founder and former chairman of the Vanguard mutual funds (one

of the largest private money-management firms in the U.S.) says he agrees with the need for stronger corporate governance across the board. In fact, he says he would like to see private pension fund and index fund managers join their public pension fund colleagues in calling for reform.

"As owners, we need to speak up for our interests," he says. "We have been silent and we have gotten the corporate governance we

tremendous political pressure on public pension funds to invest in their communities. But private mutual funds just can't do that. Unlike public pension funds, private mutual funds need to be concerned with liquidity, with the fact that shareholders could redeem the entire fund overnight. There are different pressures and interests at work."

He argues that it is "naïve" to think that socially responsible investments will outper-



The notion that we can divorce investor decisions from a critical look at how companies conduct themselves in society needs to be discarded.

deserve." He calls the private mutual fund industry, and the index funds in particular, a "sleeping industry" that owns most U.S. corporations – an industry that, because of this ownership, could have a fundamental impact on the U.S. financial system if it decides to make its views known. Bogle is, in fact, busy trying to create an entity called the Federation of Long-term Investors to help these sleeping giants do just that.

He acknowledges that convincing private money managers to criticize corporations will not be easy. "They are the investment managers for corporate America, so it is going to take courage for them to risk offending some of their customers," he says. But he is optimistic. He believes that Enron and WorldCom served as a loud wake-up call for Wall Street and that increased vigilance is a "definite long-term trend."

Bogle, however, doesn't see the private money managers moving strongly into social and environmental issues. "I can see why public pension funds do it," he says. "There is

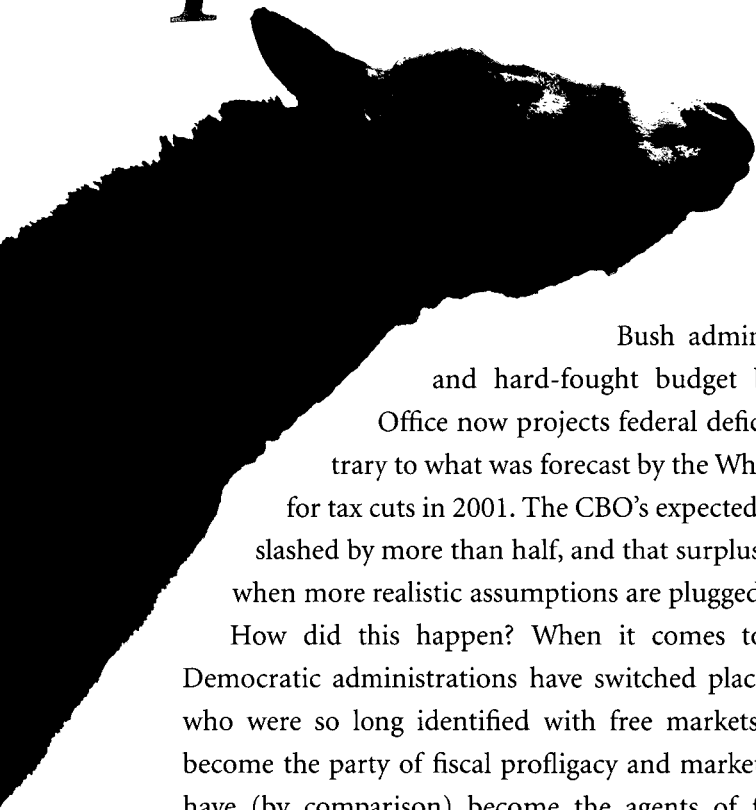
form the market. "I am an indexer at heart," he says, "so I'm skeptical. Besides, if we put out of business all the companies that pollute, we wouldn't have any electricity."

Angelides sees things differently. "Post-Enron," he says, "the notion that we can divorce investor decisions from a critical look at how companies conduct themselves in society needs to be discarded."

He also points to the energy industry: "Companies that gamed the market for their short-term benefit to the detriment of society have ended up damaging themselves and the entire sector." Institutional investors, he suggests, have an obligation to push to tear down the "false wall" between social performance and financial performance.

If he is right, companies may find that the Greenpeaces of this world are the least of their worries. Those who ignore social and environmental concerns will increasingly have to answer to more powerful forces: their mega-shareholders, institutions such as Calpers, Vanguard and TIAA-CREF. **M**

Trading policies



Almost overnight, the Bush administration threw away a long-sought and hard-fought budget balance. The Congressional Budget Office now projects federal deficits lasting well into the future – contrary to what was forecast by the White House when it successfully pressed for tax cuts in 2001. The CBO's expected cumulative ten-year surplus has been slashed by more than half, and that surplus morphs into a huge projected deficit when more realistic assumptions are plugged in.

How did this happen? When it comes to economic policy, Republican and Democratic administrations have switched places since the 1960s. The Republicans, who were so long identified with free markets and less-is-more government, have become the party of fiscal profligacy and market intervention. Democratic presidents have (by comparison) become the agents of fiscal responsibility and arms-length microeconomic policies.

Note, for starters, the aforementioned tendency for budget deficits to rise during Republican administrations. There is no mistaking the link between the Reagan and Bush tax cuts legislated in 1981 and 2001 respectively, and the dramatic shift in the long-term budget outlook. By contrast, declining deficits and then record surpluses were achieved during the Clinton years. While a variety of factors, some of which are only indirectly influenced by Executive policy, drive deficit arithmetic, two very delib-

How To Tell the Democrats

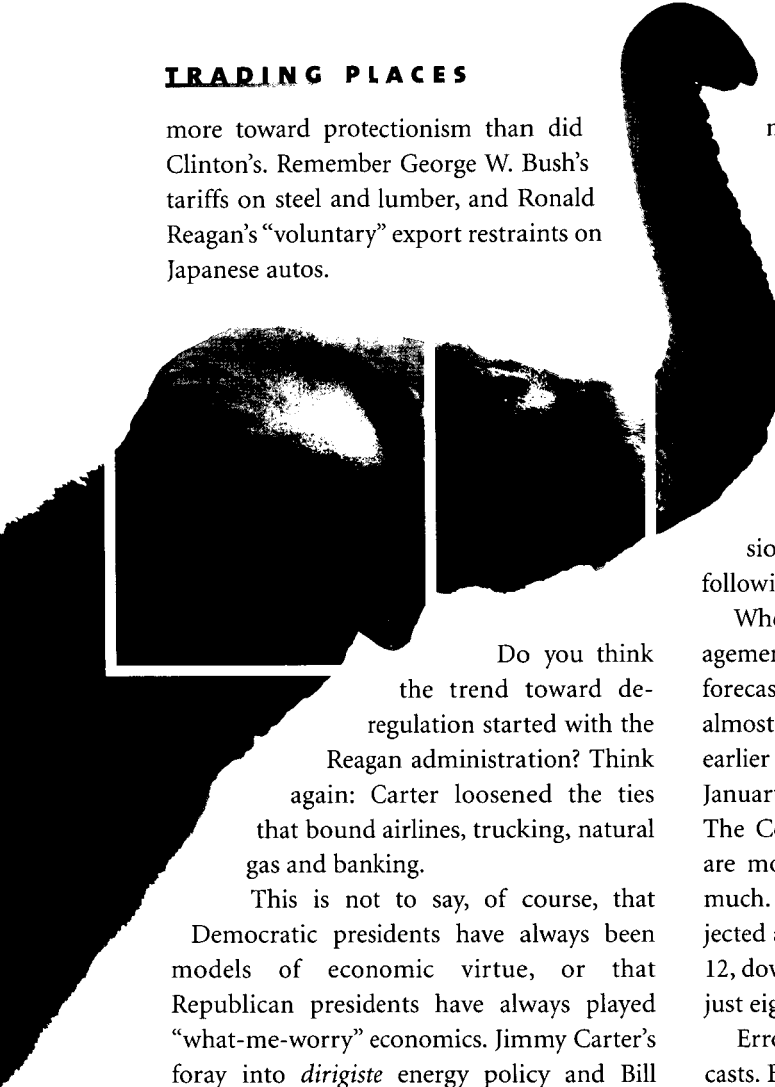
erate steps were key to the success of the 1990s: (1) President Clinton's 1993 budget package, which changed trends on both the spending and tax revenue sides of the equation, and (2) the 1998 "Save Social Security First" strategy, which parried Congressional Republicans' efforts to cut taxes and Congressional Democrats' efforts to raise spending as surpluses appeared.

The trading-places syndrome does not end with fiscal policy. Republicans are expected to care more about inflation. But as Bob Woodward noted in his book, *Maestro: Greenspan's Fed and the American Boom*, it was Presidents Reagan and Bush I who pressured the Fed to ease monetary policy. Indeed, such was the level of White House meddling that Paul Volcker decided the chairmanship was no longer worth having in 1987. By contrast, Clinton let Alan Greenspan do his job without backseat driving.

Republicans are supposed to support small government, but federal employment rose under Presidents Reagan and Bush I, and shrank under Clinton. Note, too, that Republican presidents have been big on free trade rhetoric, but their deeds have leaned

By
Jeffrey
Frankel

from the Republicans



TRADING PLACES

more toward protectionism than did Clinton's. Remember George W. Bush's tariffs on steel and lumber, and Ronald Reagan's "voluntary" export restraints on Japanese autos.

Do you think the trend toward de-regulation started with the Reagan administration? Think again: Carter loosened the ties that bound airlines, trucking, natural gas and banking.

This is not to say, of course, that Democratic presidents have always been models of economic virtue, or that Republican presidents have always played "what-me-worry" economics. Jimmy Carter's foray into *dirigiste* energy policy and Bill Clinton's health care initiative were misguided. Conversely, Ronald Reagan's firing of striking air traffic controllers changed the wage bargaining climate in ways that helped to break the back of inflation. George Bush I's 1990 decision to revoke his "no new taxes" campaign pledge was a brave step, which presaged Clinton's later efforts to eliminate the budget deficit. Nevertheless, it is striking how many examples go the other direction – and

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more striking still that public awareness of this political cross-dressing has not caught up with reality.

The White House's current inclination to opt for guns *and* butter only raises the stakes. If we are going to be spending more on security, we should be asking more of Americans – not passing out the goodies. The economies of Japan and Germany are each stuck in low-growth traps as the result of bad economic policy decisions. The United States is in danger of following them into the mire.

When the White House Office of Management and Budget releases its 2003 budget forecasts in February, the fiscal outlook is almost certain to be worse than revealed in earlier forecasts – just as its initial forecasts in January 2001 have already proven optimistic. The Congressional Budget Office's forecasts are more closely tied to reality, but not by much. The CBO's August 2002 forecast projected a \$1 trillion surplus for the years 2003-12, down from the \$2.2 trillion figure forecast just eight months earlier.

Errors are inevitable in long-term forecasts. But systematic biases are at work here.

1. Official projections assume that discretionary spending will increase only 2.7 percent a year – enough to keep even with inflation, but in no way enough to account for a growing population or growing demand for services linked to rising living standards. The nonpartisan Concord Coalition estimates that if spending were to stay constant as a share of GDP, it would increase by \$1.1 trillion in the decade (or \$1.3 trillion when rising interest on the federal debt is included) – enough to wipe out the CBO's projected surplus.

The notion that spending will remain proportional to GDP is hardly liberal pie-in-the-

sky. Government outlays over the past four years have been rising at more than double that rate, and the pace shows no signs of abating. The national security menu includes new initiatives ranging from fighting terrorism, to fighting Iraq, to missile defense. Meanwhile, both parties favor a prescription drug benefit for Medicare. And a host of lesser initiatives are likely to add *avoids* to the spending side.

Spending discipline was reestablished in the 1990s only by means of legislated caps, and an agreement not to touch the Social Security surplus. Those spending caps have now expired, and what little remained of the Social Security “lockbox” after the 2001 tax cut was blown to smithereens on September 11. Thus the political dynamic on fiscal policy has reverted to that of the 1980s. Perhaps worse, from the viewpoint of budget balance, is the return of one-party rule. In the 1980s and '90s Congressional gridlock inhibited major new spending increases and tax cuts. That source of inhibition is now gone.

2. Rosy Scenario, the muse of budget forecasting discovered by David Stockman, President Reagan's budget director, is alive and well and living in the Budget Office. Tax receipts depend on income. The official budget forecasts call for a rate of growth in real income well above 3 percent over the next 10 years. When I worked in the White House from 1996 to 1999, real growth was averaging above 4 percent. But we knew there was a chance that it would prove unsustainable – that the information technology boom would fizzle, that the New Economy would prove to be part-hype, that recession was still possible. Hence we conservatively assumed a long-run growth rate of less than 3 percent.

The last few years proved good times do

have a way of ending, or at least slowing down. Yet White House forecasts are now underpinned by substantially higher productivity growth than we assumed in the late 1990s.

Did the previous administration also have its thumbs on the scale? Not while I was in the White House. But you don't have to take my word for it: the Clinton administration's mistake was to *underestimate* economic growth, tax revenues, and budget surpluses – not useful in furthering the goals of “big-spending Democrats.”

TRADING PLACES

Future tax receipts also depend on “technical” assumptions. In the 1990s, tax revenues increased serendipitously, even after adjusting for unexpectedly rapid income growth. It seemed likely that the windfall was linked to the soaring stock market – to capital gains and stock-option compensation – and that the increase should therefore not be extrapolated into the future. And sure enough, during the past two years of sharp declines in the stock market, tax receipts were lower than the models predicted, even given the disappointingly slow growth of income.

Thus one might have expected the stock market doldrums to lead to downward revisions of revenue estimates. Instead, some Congressional Republicans are gilding the wilted lily, actually pushing CBO to adopt “dynamic scoring” that would institutionalize a degree of over-optimism in projections still worse than the current system.

3. The Republicans are proposing to make the 2001 tax cuts permanent, in addition to extending other tax cuts that are scheduled to expire. The Concord Coalition estimates that this will cost another \$1 trillion in revenue in the 2003-12 budget window (and a lot more thereafter, of course). And in December, CBO confirmed the obvious: making the tax cuts permanent would wipe out the nominal \$1 trillion surplus. Combine the revised revenue forecast with an increase in outlays to keep up with the size of the economy, and yesterday’s 10-year, \$1 trillion surplus becomes today’s \$1.5 trillion deficit. Or, projecting an 8.5 percent rate of increase in discretionary spending (the rate of the last four years), we get a deficit of \$2.9 trillion.

4. The not-so-small matter of Social Security and Medicare still looms. The baby boom generation will begin to retire at the end of this decade. And while the two trust funds

behind them are not broke, there won’t be nearly enough money to cover the benefits on a pay-as-you-go basis. The Bush administration’s proposals to partly privatize Social Security are beside the point, because they wouldn’t affect existing liabilities.

Benefits will thus almost certainly have to be cut in coming decades; the only question is how much. This issue is not one that can be addressed in a 10-year budget window. However, if we are not going to concern ourselves in the budget context with these future liabilities, we should at least not count earmarked Social Security tax revenue in 10-year budget projections. If we opt for the more responsible approach, the 10-year projected deficit reaches \$4 trillion – or even \$5.4 trillion if we (quite reasonably) extrapolate from spending increases in the past four years.

5. All the projections assume that Washington will allow the Alternative Minimum Tax to bite into the take-home pay of the middle class. Economist Bill Gale of the Brookings Institution points out that the AMT was enacted to quell outrage over the fact that 155 rich people paid no taxes at all in 1969 – mostly because they collected oodles of interest from tax-exempt bonds. But because the AMT is not indexed to inflation, it will apply to 36 million by 2010. Nobody thinks this should (or will) be allowed to happen.

Economists Alan Auerbach, Bill Gale and Peter Orszag estimate that adjusting the AMT so that it bites the same number of taxpayers in 2010 as it did in 2002 would reduce revenues by another \$700 billion over 10 years. When this \$700 billion is added to the costs of making the tax cuts permanent and letting spending grow with the economy, the bottom line is a \$5.4 trillion deficit.

WHAT TO DO ABOUT THE TAX CUT

The 2001 tax cut, which reduced 10-year rev-

enues by an estimated \$1.3 trillion, obviously played a large role in changing the long-term fiscal outlook. Some sort of tax relief was not necessarily a bad thing, especially in a recession year like 2001. But the specifics were dubious. A well-designed tax cut should:

- be timed to be countercyclical, increasing private purchasing power when the econo-

lies that the 10-year plan that was enacted into law will stand as it is, making planning very difficult).

In 2010 the federal exemption from estate taxes, which will then be \$3.5 million, is due to be raised to infinity – for just one year! Then it will bounce back to only \$1 million in 2011 – the assumption built into current offi-

You think lower rates increased incentives to work? According to Treasury data, fully 64 percent of those with positive tax liability get no cut in taxes on an extra dollar of income.

my ebbs and phasing out when growth is restored.

- be responsible in the sense of not eroding the tax base in the long term.
- increase incentives to work and invest.
- be fair in the sense of not increasing inequality in after-tax incomes, especially in an era of rising inequality.
- simplify taxpayer compliance and planning.

While there were a few bright spots in the tax package – for example, the \$300 rebate was well timed in terms of the business cycle – for the most part it failed all five tests. You think lower rates increased incentives to work? According to Treasury data, fully 64 percent of those with positive tax liability get no cut in taxes on an extra dollar of income.

The estate tax cut was particularly egregious in this regard. Almost any tax cut would have more attractive incentive and equity effects than the elimination of the estate levy. Furthermore, the plan to eliminate the tax in the year 2010 simultaneously manages to violate the criteria of countercyclical timing (we needed stimulus in 2001, not 2010) and simplification of planning (hardly anyone be-

lieves that the 10-year plan that was enacted into law will stand as it is, making planning very difficult).

There is little political support for recapturing the \$1.3 trillion revenue, but it might be possible to shuffle both the beneficiaries and the timing of the benefits. I would cap the estate tax exemption at a modest level. This would save revenue that could be used to fix the alternative minimum tax, to give low-income workers the same break on their payroll taxes the rest of us got in 2001 on income taxes, and to raise the standard deduction on the income tax. Other possible uses for the revenue – particularly if the economy weakens again – include extending unemployment benefits or returning some of the money to the hard-pressed states to spend on health insurance and education. Any cuts should take effect now, not years in the future, if the point is to strengthen the recovery today.

WHAT EXPLAINS ROLE REVERSAL?

It's a grand puzzle. After all, Congressional

TRADING PLACES

Democrats are no more committed to free trade and small government than their

Republican counterparts. A plausible explanation stems precisely from the fact that Democrats remain saddled with the big-government image.

Hence they believe they can't elect a president unless they bend over backwards to prove their commitment to mainstream policies. The public seems willing, however, to accept Republican presidents who believe that it is enough to talk the talk without walking the walk.

If economic reality were so simple that "small government" was always the right answer (or, for that matter, if "big government" were), it would be hard for any president to live with the contradiction. But there is almost always some intellectual and ideological wiggle room on the issues. Various forms of market failure call for appropriately targeted government intervention by Republicans or Democrats, while "doing nothing" is not a meaningful option in monetary and fiscal policy. Thus consistent policy does not always imply laissez faire.

Examples of regulation that can fit the worldview of policymakers across a broad

swath of ideology range from antitrust policy aimed at price-fixing, to pollution regulation that forces producers and consumers to bear the costs of their own emissions. Neither party has consistently distinguished itself in the design of regulation. But by the 1990s, antitrust and environmental regulation espoused by both parties had become more consistent with good economics. For example, the system of tradable permits in power plant emissions of sulfur dioxide minimizes the cost of achieving mandated cleanups.

But this good-government convergence has hardly ended the push and pull of interest group politics. An example of botched regulation that received a lot of attention recently is corporate governance. Then-SEC Chair Arthur Levitt warned about conflicts of interest within accounting firms that sold management consultant services to the same clients. Democrats, as much as Republicans, prevented him from doing anything about it. But Levitt was appointed by Clinton. President Bush, by contrast, appointed Harvey Pitt as Levitt's successor – apparently in order to reduce the level of SEC oversight.

When it comes to monetary and fiscal policy, even a libertarian has to admit that a belief in the virtue of minimal government is not an all-purpose compass. In the face of large budget deficits, does the small-government principle tell you to cut taxes to improve work and saving incentives – or to raise taxes, so government borrowing doesn't crowd the private sector out of capital markets?

Proponents of tax cuts passionately assert the former. If the ultimate goal is cutting spending, they say, a pragmatic means toward that end is to cut taxes first – thereby creating a budget deficit that will pressure Congress to cut spending. (Leave aside that a majority of Republican congressmen who make this argument cannot, in fact, come up with a list

of things they are willing to cut.)

But there is a logical flaw in the hypothesis that deficits put more downward pressure on spending than does a legal rule that taxes must be raised to pay for incremental spending. The theory implies that congressmen worry more about getting grief from their constituents over future increases in the national debt than about the grief they get from their constituents over taxes they'll pay on April 15. Perhaps deficits do put some downward pressure on spending. But the threat of higher taxes today (as opposed to, say, the threat of high taxes in 20 years) is surely more potent. If you want to create a political mechanism for restraining growth in spending, pass a law that any spending increases must be matched with current revenues. That is roughly what we had in the 1990s, and it largely worked. Cutting taxes manifestly does not.

The other argument is somewhat technical. According to the conventional wisdom, deficits create a shortfall of national saving – which drives up real interest rates and raises the cost of capital. The counterargument is that private saving will increase in anticipation of the need to pay taxes to service the national debt down the road, so there is no net impact on the credit markets. Much is made of this latter hypothesis when some particular econometric study reveals no evidence that budget deficits do indeed raise the cost of capital. Still, the claim that borrowing trillions of dollars from savers has no effect on interest rates paid by private borrowers seems implausible on its face. The smoking gun is hard to find because interest rates are determined by many influences. But it is even harder to find evidence that budget deficits lead to increased private saving. There is little question that budget deficits eat up aggregate national saving, and therefore “crowd out”

private investment, whether via the interest rate or otherwise.

A LITTLE SUBTLETY, PLEASE

It is easy to fall into the trap of thinking that governing is a matter of sticking to the playbook. But a president who views the world in such simplistic terms will not be prepared for the work of sifting through ambiguous information, making political tradeoffs, and confronting interest groups. That, alas, is what good economic policy demands.

Excessive intervention is less the product of the moral failings of politicians and bureaucrats, and more the consequence of representative government. Most farmers truly believe that they oppose big government, but that farm supports are somehow *sui generis*. The same is true for loggers, steelworkers, energy executives and practically everyone else who pays dues to a trade association.

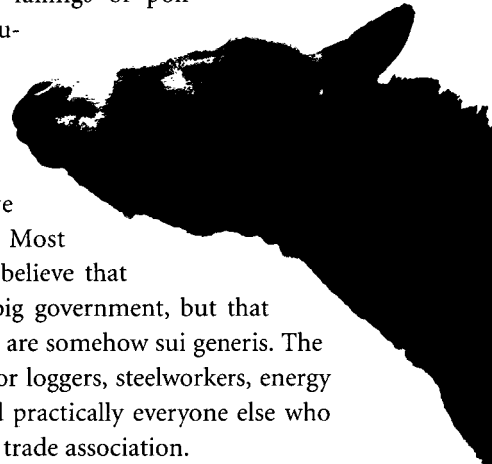
Once more: Why do Republicans and Democrats exchange garments? Mostly because traditional fashions in governing have little to do with contemporary realities in policy or politics.

Editor's Note: Worried that Jeff Frankel's version of recent economic history is partisan? Check out these books, which contain the recollections of key Republicans and Democrats, as well as those of astute neutral observers:

American Economic Policy in the 1980s, edited by Martin Feldstein (University of Chicago Press, 1994).

American Economic Policy in the 1990s, edited by Jeffrey Frankel and Peter Orszag (MIT Press, 2002).

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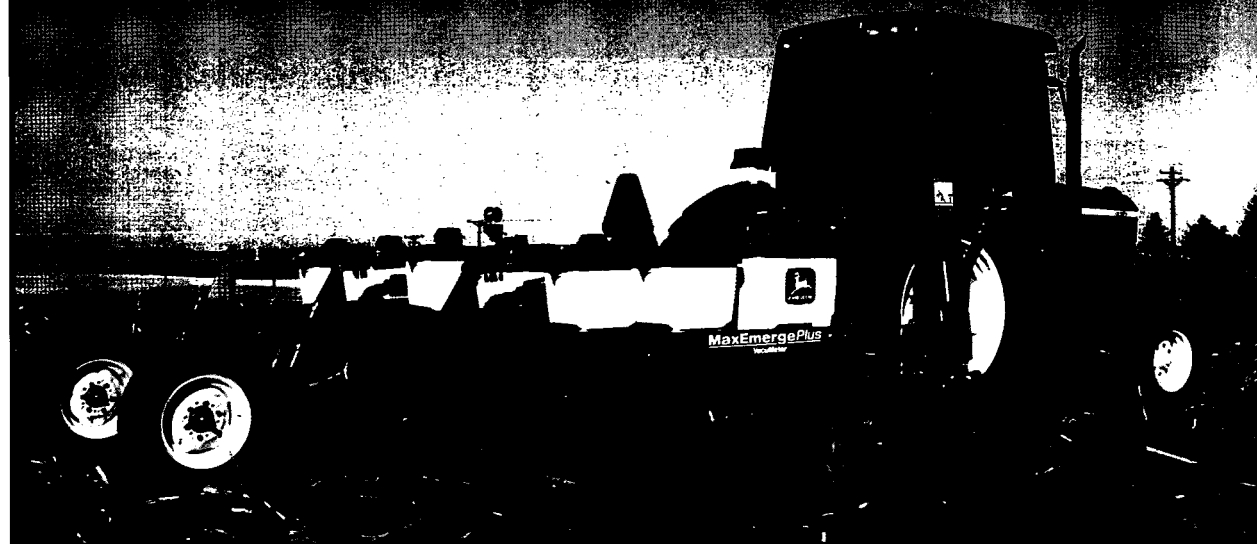


in the World

Surveying the world economy, optimists argue three somewhat contradictory propositions. First, that the phenomenon of polarization – the divergence of successful from unsuccessful economies – is not really occurring. Second, that polarization is occurring, but is not connected to globalization. Third, that enlightened policies in the United States and the European Union can ensure that all countries prosper. All three propositions, I would argue, are grand illusions. To be charitable, they reflect high-minded aspirations, however unrealistic. But it is hard to escape the conclusion that the polarization problem can't be fixed, say, by changing America's unilateralist impulse or introducing sweet reason to the Middle East. In the end, the challenge will be to live with polarization and to minimize its damage to the global commons.

AP/WIDE WORLD PHOTOS

zation



Economy

By Gary Clyde Hufbauer

Those who use their eyes as well as their databases see the vast differences between “haves” and “have-nots” in the contemporary world. But note the crucial distinction between polarization and disparity. Differences between haves and have-nots may not be widening – for example, decade after decade, the haves may earn 10 times the income of have-nots. But grievances certainly sharpen as the have-nots come to see the comparative wretchedness of their lives.

Only a mean-spirited person, we like to think, compares his or her income with that of a neighbor’s – or with someone across the ocean. Yet truth to tell, a lot of people do covet their neighbors’ houses. And thanks to television, every poor Egyptian and Pakistani can see our houses as well.

POLARIZATION



The argument that polarization has not occurred is based on two errors. First, it ignores the distinction between polarization and disparity; second, it counts people and forgets countries. Ignoring national boundaries, world income distribution is pretty much the same today as it was a couple of decades ago. In 1980, the top 20 percent of the world's population captured 84.4 percent of the world's GDP, while in 2000, the top 20 percent took 85.6 percent of world GDP.

But this comparison conceals a lot of misery. Over the past 30 years, the favored regions of China (where 500 million of its 1.2 billion citizens live) and India (where 300 million out of its one billion live) have prospered. And these prosperous regions pulled up the per capita average of the two most populous nations. But success has not been shared by a large number of equally poor but less populous nations. Nor, for that matter, has it been shared by disfavored regions within China and India; the rich coastal provinces

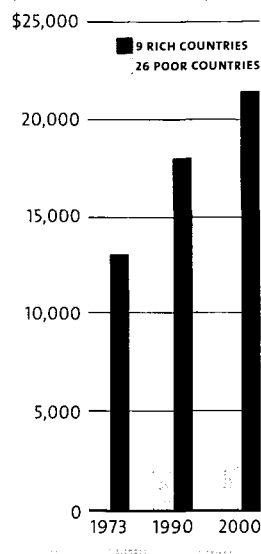
in China enjoy a per capita income that is a stunning five times that of the poor interior provinces.

Consider two groups of countries: nine rich OECD countries that in 1973 accounted for about 20 percent of the world's population, and 26 poor countries with roughly 65 percent of the population. The ratio of income per person in the rich countries to income per person in the poor ones declined from 13.4:1 to 9:1 during the 27 years from 1973 to 2000 – a convergence that largely reflects China's amazing performance. If the Chinese miracle continues and if India follows the same path – here we define “miracle” as 4 to 5 percent annual per capita income growth for China and 3 to 4 percent for India – for another half century, the income ratio between rich and poor people would decline to a bit more than four to one. Score one for the optimists.

On the other hand, if we count each country as a statistical unit rather than weighting

AVERAGE GDP PER CAPITA OF RICH AND POOR COUNTRIES

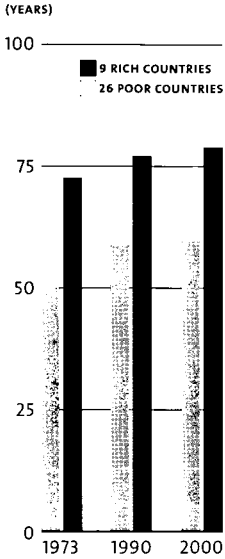
(1990 INTERNATIONAL DOLLARS)



SOURCES: Angus Maddison, *The World Economy, A Millennial Perspective* (OECD, 2001), World Bank, *World Development Report, 2000/2001*.

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AVERAGE LIFE EXPECTANCY OF RICH AND POOR COUNTRIES



SOURCE: World Bank, *World Economic Indicators*, 2002.



rich countries and the 26 poor countries was 9.3:1 in 1973 and 9.4:1 in 2000 (after dipping down in the 1990s). That's a huge and durable life gap, and the recipe for acute polarization.

My simple comparisons are confirmed by sophisticated statistical techniques. Using a constant poverty line (\$1.08 per day in real terms), Surjit Bhalla, managing director of Oxus Research and Investment, found that the percentage of the world living in poverty fell from 44 percent in 1980 to 13 percent in 2000 – the fastest decline in history. Indeed, during the past two decades, most people were getting richer, and the very poorest people were bettering their lives at a faster rate than the rest.

Unfortunately, though, most who left the ranks of the truly poor still live close to subsistence. Moreover, a reduction in hard-core poverty does not imply a convergence in

by population, a decidedly less optimistic picture emerges. The income ratio between the nine

world income distribution. Based on an analysis of 33 countries, the economists François Bourguignon and Christian Morrison found virtually no change in global income inequality between 1960 and 1992.

Slow convergence or even no convergence is not just a characteristic of income levels; it also shows up in social indicators like life expectancy. In 1973, the difference in life expectancy between the nine rich countries and the 26 poor countries was 14.4 years. In 2000, the difference was 13.8 years – a very modest improvement. Citizens of other poor countries do not, on average, live as long as Chinese or Indians. On a country-average basis, the 1973 gap for the 26 poorest countries was 19.4 years; in 2000 the gap was still an awful 18.8 years.

It's wonderful that China has done so well. But the stellar record of China and the above-average performance of India are not decisive in the debate over polarization. Countries matter, too: While India has seven times the population of Pakistan, it is not seven times as important in geopolitical terms.

It need hardly be said that small and

POLARIZATION



medium-sized countries can create enormous problems. Afghanistan (population 25 million) nourished Al Qaeda. North Korea (21 million) menaces neighbors with its nuclear weapons program. Cambodia (12 million), Yugoslavia (23 million) and Rwanda (9 million) all spawned horrific genocides.

GEOGRAPHY AND CULTURE

Polarization is colored by geography and culture as well. To see the coloration, it's useful to distinguish three groups of developing countries, based on per capita GDP levels and recent growth performance. In the top tier are the "winners": most of East Asia; the prosperous regions of China and India; lucky associates linked to the United States and the European Union; and a handful of "free-standing" countries. All told, during the past three decades 34 developing countries and 1.5 billion people have joined the winners.

In the middle tier are strugglers: most of

Polarization does not stop with income and life expectancy. It is colored by geography and culture as well.



Latin America; the provinces of China beyond the coast; much of the Middle East and Central Asia; Russia; Indonesia; Malaysia; and several countries in Latin America. Collectively, 1.9 billion people and 49 developing countries belong to the camp.

In the bottom tier are losers: nearly all of Africa; the poor states of India; Pakistan and Bangladesh; much of Indochina; and a few countries in Central and Latin America. Some 1.7 billion people and 56 non-developing countries are lost in the sea of losers.

I originally assigned non-OECD countries to the respective categories – winners, strugglers and losers – on a subjective basis. The economist Evan Hillebrand subsequently

devised objective measures that closely parallel my judgments.

Based on Hillebrand's rules, winners are countries with per capita GDP exceeding \$3,500 (in terms of purchasing power) and growth in per capita income of at least 20 percent in the last five years, along with countries with per capita GDP greater than \$8,750 that has not fallen by more than 5 percent in the last five years. Strugglers are countries that are not winners, but have 2001 per capita GDP greater than \$2,500 and a five-year record that left them no worse than 5 percent below the 1996 income level. Losers are all the rest.

The record since 1981 is startling. Two decades ago, losing countries on average earned 10 percent of US per capita GDP (in terms of purchasing power). This figure fell steadily, reaching just 5 percent in 2001. In 1981, struggling countries on average earned 25 percent of US per capita GDP, and by 2001 the figure had declined to 15 percent. In 1981, winning countries on average earned 43 percent of US per capita GDP; they, too, fell behind the United States in the last two decades, but in 2001 the figure was still 38 percent.

What do the winners have in common? Most are in temperate zones – though there are a few exceptions, including Singapore, Costa Rica and Qatar. Most have dominant Confucian, Buddhist, Hindu or Christian cultures. The business and professional classes read or speak English. Winning countries are generally situated close to large economic markets – either their own, or the markets of Europe and North America. Those situated far away have good seaports and make the most of world trade and investment.

And what do the losers have in common? Many of them are located in tropical zones. Many have dominant Muslim cultures. English is not widely spoken. Many are far

WINNERS

COUNTRY	1998 POPULATION (MILLIONS)	1981	PER CAPITA GDP (PPP RATES) CONSTANT (2001) DOLLARS		
			1991	1996	2001
Argentina	36.3	11,421	10,379	12,172	11,859
Bahamas	0.3	11,587	13,663	14,494	16,347
Bahrain	0.6	14,863	12,422	12,935	14,618
Barbados	0.3	11,876	12,958	13,294	15,237
Belarus	10.2	6,920	8,898	5,890	8,146
Botswana	1.6	3,350	6,210	6,624	8,937
Chile	14.8	6,430	6,408	8,554	9,556
China*	542.1	847	1,826	3,099	4,321
Cyprus	0.7	9,510	14,496	17,761	21,080
Czech Republic	10.3	13,382	12,820	14,076	14,760
Dominican Rep	8.1	4,395	3,909	4,633	5,955
Estonia	1.4	9,362	8,326	7,579	10,165
Hungary	10.2	10,142	9,606	10,017	12,751
India*	314.3	1,218	1,649	2,063	2,485
Israel	6.0	14,261	15,998	18,576	19,609
Kazakhstan	15.6	6,920	5,957	5,139	6,462
Latvia	2.4	9,362	9,539	5,822	7,984
Lithuania	3.6	9,362	14,283	6,392	7,720
Malta	0.4	8,485	13,140	14,819	16,769
Mauritius	1.2	4,483	6,715	8,211	10,560
Mexico	98.6	8,761	8,041	7,798	8,897
Oman	2.3	8,272	10,595	11,420	11,347
Poland	38.6	6,656	5,819	7,688	9,414
Qatar	0.5	32,506	16,985	16,296	23,442
Singapore	3.9	11,578	18,099	24,035	25,269
Slovakia	5.4	10,949	8,686	9,979	11,778
Slovenia	2.0	6,614	13,328	15,103	18,422
South Africa	42.8	10,356	8,941	9,165	9,647
South Korea	46.4	5,274	11,785	15,642	18,371
Taiwan	21.8	7,654	14,173	18,418	21,565
Trinidad	1.3	8,410	6,568	7,300	9,211
Tunisia	9.3	4,078	4,586	5,390	6,543
UAE	2.7	28,065	16,005	19,772	19,437
Uruguay	3.3	8,617	7,546	9,001	8,836
United States	270.6	23,764	28,790	31,706	35,373

	TOTAL POPULATION (MILLIONS)	AVERAGE PER CAPITA GDP (PPP RATES)			
		1981	1991	1996	2001
WINNERS	1,529.9	10,250	10,809	11,729	13,541

* Population figures are of winning provinces and states for China and India, respectively.

SOURCE: Author with World Bank data

from large economic markets – often inland, with difficult connections to navigable rivers or ports. They don't participate deeply in world commerce.

In official discourse, these distinctions are generally ignored. The rationale – which is, arguably, valid – is that good government and good economic policy can overcome cultural and geographic liabilities. Malaysia and Argentina are cited as illustrative cases: Malaysia with good public policy, Argentina with bad. While culture and geography may

POLARIZATION

Just consider global differences in the distribution of pharmaceuticals and public health.



not be decisive, they are not trivial, and they do contribute to polarization.

POLARIZATION AND GLOBALIZATION: CONNECT THE DOTS

Globalization – by which I mean rich commercial and cultural connections between countries – has proved an enormous boon both to the world economy and to recent arrivals in the winners' circle – countries including Spain, South Korea and Chile. The proof is in the statistics: as the economic historian Angus Maddison has shown, world income grew faster in the second half of the 20th century than in any previous era in human history. Yet, while globalization is not the principal source of the losers' problems, it is certainly linked to the dismaying chasm separating winners from losers.

Recall a point emphasized earlier: polar-

ization is most clearly evident in relative measures. When globalization enables people in some countries to prosper and enjoy longer lives, it makes those in laggard nations feel worse, even though they may be better off in absolute terms.

Forget about heart and kidney transplants, which are virtually unavailable outside the rich OECD nations. Just consider global differences in the distribution of pharmaceuticals and public health. In the early 20th century, people everywhere died from influenza and tuberculosis and were crippled by polio. Today, HIV, tuberculosis and malaria are concentrated in loser countries where proven treatments are generally out of reach.

The connection between globalization and polarization goes beyond the fact that Japan, Western Europe, North America and a handful of other countries did well over the past half century, fueling resentment among the laggards. And it goes beyond the highly unequal distribution of the tools of public health.

Rulers of losing countries have assimilated the offerings of a global economy all too well. Local autocrats customarily acquire the latest communications and weapons systems, the better to control their subjects. They also ac-

quire high-grade financial technology, which cements the concentration of wealth.

What else links globalization to polarization? Sophisticated corporate malfeasance and financial crises are an imported disease. The protection of economic “rents” – good for the rent collector, bad for the economy – owes much to techniques perfected in Japan, Europe and the United States. OECD efforts to interdict narcotics trafficking corrupts legitimate authority, increases violence and undermines the rule of law. OECD banks provide anonymity and security for plundered wealth. Communicable disease travels quickly by plane and ship in a global economy, while modern medicine travels slowly – at least to the poorest countries. New technology systemically enhances productivity in agriculture and mining. But the poorest countries, alas, are slow to adopt new technology and simply suffer from depressed terms of trade as their exports buy less. Global warming, largely a byproduct of growth in the winning countries, apparently changes weather patterns and increases the number of violent storms – and thus it is likely to hit countries that depend on stagnant agriculture particularly hard.

Finally, there are the aforementioned links between vastly improved communications – the hallmark of globalization – and rising resentment.

US AND EU TO THE RESCUE?

The grandest illusion of all, promoted by all sorts of well-intentioned people and institutions, asserts that the rich countries can rescue the losers through enlightened policies. Believers differ on what they mean by enlightened policies. Jimmy Carter preaches democracy; Paul O’Neill preaches the Washington Consensus on trade and capital flows; the World Bank president, James Wolfensohn,

STRUGGLERS

COUNTRY	1998 POPULATION (MILLIONS)	1981	PER CAPITA GDP (PPP RATES) CONSTANT (2001) DOLLARS		
			1991	1996	2001
Albania	3.4	4,213	2,737	3,361	3,936
Algeria	30.5	4,867	4,586	4,628	5,224
Armenia	3.8	6,920	4,856	2,149	2,922
Azerbaijan	7.9	6,920	6,399	2,053	3,064
Brazil	169.8	6,772	6,763	7,322	7,558
Bulgaria	8.3	5,879	5,760	5,237	6,036
China*	626.0	847	1,826	3,099	4,321
Colombia	38.6	5,260	5,666	6,395	6,066
Costa Rica	3.7	5,945	6,063	7,011	8,197
Croatia	4.4	6,614	7,390	7,237	8,562
Cuba	11.1	3,299	2,864	2,285	2,701
Ecuador	12.2	3,656	3,242	3,318	3,114
Egypt	66.1	2,799	3,012	3,323	3,845
El Salvador	6.0	3,091	3,656	4,332	4,565
Fiji	0.8	4,769	5,023	5,331	5,214
Georgia	5.4	6,920	5,685	2,194	2,901
Guatemala	10.8	4,192	3,514	3,728	3,906
Guyana	0.8	3,220	2,233	3,331	3,804
Indonesia	204.4	1,808	2,521	3,269	2,982
Iran	64.4	4,656	4,964	5,669	6,320
Jamaica	2.6	3,449	3,844	3,818	3,703
Jordan	4.6	5,141	3,538	4,124	4,139
Kuwait	1.9	36,982	14,905	21,193	18,960
Kyrgyzstan	4.8	6,920	3,973	2,233	2,749
Lebanon	4.2	3,466	3,648	4,607	4,707
Lesotho	2.0	2,001	2,189	2,473	2,709
Libya	5.1	7,477	8,126	6,960	6,772
Macedonia	2.0	6,614	5,771	4,778	4,930
Malaysia	20.9	4,379	5,806	8,185	8,460
Morocco	29.1	3,118	3,652	3,622	3,743
Namibia	1.7	7,871	6,083	6,455	6,797
Panama	2.8	4,870	4,735	5,428	5,803
Paraguay	5.2	5,476	4,846	4,858	4,463
Peru	26.1	5,866	4,000	4,678	4,748
Philippines	77.7	4,437	3,967	4,215	4,423
Reunion	0.7	4,172	4,958	5,075	5,496
Romania	22.4	8,076	6,412	7,392	7,081
Russia	146.9	9,362	12,109	7,555	8,785
Saudi Arabia	19.7	19,102	14,137	12,276	11,554
Sri Lanka	18.9	485	644	3,120	3,611
Suriname	0.4	5,022	2,939	3,312	3,358
Swaziland	1.0	6,039	4,443	4,460	4,758
Syria	15.4	3,157	2,823	3,558	3,490
Thailand	60.0	2,831	5,230	7,154	6,645
Turkey	64.6	4,771	6,025	6,878	6,736
Turkmenistan	4.9	6,912	7,227	3,964	4,646
Ukraine	50.3	6,912	8,033	3,688	4,210
Uzbekistan	24.1	6,912	2,893	2,238	2,506
Venezuela	22.8	6,791	6,307	6,125	5,975

STRUGGLERS	TOTAL POPULATION (MILLIONS)	AVERAGE PER CAPITA GDP (PPP RATES)			
		1981	1991	1996	2001
STRUGGLERS	1,921.0	6,050	5,212	5,137	5,351

* Population figure is of struggling provinces in China.

SOURCE: Author with World Bank data

preaches more financial assistance and freer access to OECD markets; a Nobel laureate, Joseph Stiglitz, preaches a kinder and gentler IMF. Ever the master of the sound bite, Jeffrey

POLARIZATION

Sachs of Columbia University commends “weapons of mass salvation.” What these proponents have in common is their advocacy of lifelines thrown from the OECD to the losers.

Lifelines can be enormously helpful for countries with half-decent governments and some respect for free market outcomes.

very policies would cut into their toll collections? This most obvious of observations tells us why loser countries today have every chance of remaining losers 30 years hence, no matter how many lifelines are thrown their way. What possible good can come from extending assistance to Robert Mugabe or to Burmese generals?

The grandest illusion of all, promoted by all sorts of well-intentioned people and institutions, asserts that the rich countries can rescue the losers through enlightened policies.

Some, including Morocco, South Africa, Egypt, Indonesia, Brazil and Peru, could potentially benefit from financial assistance, market access and policy guidance from the OECD.

But few of the losers have anything approaching half-decent governments or respect for markets. Nearly all are ruled by organized criminals. These rulers have no interest in grasping lifelines from the OECD; predation is their goal. Thus, Arnaldo Aleman, the former president of Nicaragua, could plunder his nation for \$100 million. In some losing nations, like Iran, the ruling clerics amount to medieval toll collectors; in others, like the Congo or Angola, the country is overrun by armed bandits; in still others, like Zimbabwe and Myanmar (Burma), the armed bandits and toll collectors answer to the same crime family in the capitol.

None of this is news. But what the optimists fail to acknowledge is the durability of predatory systems. The only thing new about “kleptocracy” is the word itself. Why should predatory rulers implement policies that could deliver 5 percent growth, when those

Pathologies in these countries run so deep that blessings in the form of oil and foreign aid simply enrich the kleptocrats. Saudi Arabia illustrates the waste of oil riches: under the grasping governance of the house of Saud, per capita GDP fell by one-quarter between 1973 and 1998. Zambia illustrates the futility of aid: if the \$2 billion in assistance that Zambia received between 1960 and 1995 had been invested with a 6 percent compounded return, Zambian per capita income would now exceed \$20,000. Instead, the figure is \$600 – one-third lower than at independence. Likewise, privatization generally just creates new opportunities for plunder, and “democracy” too often does little more than create a revolving door for toll collectors.

Leaders in these countries deserve a hook, not a lifeline, and the countries need to be governed by international trustees. That, of course, is not about to happen except in the rarest of circumstances. Haiti, the Congo, Angola, Zimbabwe, Iraq, Burma and Cambodia, among others, have been conspicuously misgoverned for decades.

Thanks to its alliance with terrorists,

Afghanistan might conceivably be freed of warlords. Thanks to its weapons of mass destruction, Iraq may be reconstituted as a functioning nation. But a vast majority of countries on the losers list will surely be left to their misery.

THE INTERVENTIONIST IMPULSE

Walter Russell Mead of the Council on Foreign Relations identifies four competing schools of American foreign policy: Jeffersonian, Hamiltonian, Jacksonian and Wilsonian. To greatly oversimplify, the Jeffersonians advocate minimal involvement, fearing the corruption of American democracy. Hamiltonians seek to enlarge the number of nations receptive to market-oriented trade and investment ties. Jacksonians strike hard when American security is threatened, while Wilsonians put enormous faith in international institutions. Seldom has one school dominated American policy for an extended period. If Afghanistan is dragged out of the embrace of warlords, and if Iraq is reconstituted, those achievements will represent President Bush's flourish of Jacksonian policy.

But it's an enormous leap from nation building in Afghanistan and Iraq to taking on the problems of the losers sprinkled across Africa, Central Asia and other parts of the globe. To take on that task would require sustained Wilsonian diplomacy. It would entail the wholesale rebuilding of institutions, enormous flows of grant aid and free trade between the United States and the poorest countries on earth. No precedent exists for that degree of US involvement. And no appetite exists, within the United States or elsewhere, for letting intrusive Wilsonians run foreign policy for a generation.

LIVING WITH POLARIZATION

If, as I contend, polarization is a durable

LOSERS

COUNTRY	1998 POPULATION (MILLIONS)	1981	PER CAPITA GDP (PPP RATES) CONSTANT (2001) DOLLARS		
			1991	1996	2001
Angola	12.4	1,437	1,670	1,382	1,572
Bangladesh	125.1	1,040	1,245	1,442	1,704
Benin	6.0	1,114	909	957	1,045
Bolivia	8.0	2,442	2,175	2,318	2,414
Bosnia	3.8	6,614	2,789	645	1,121
Burkina	10.7	921	988	935	1,035
Burundi	6.5	578	652	596	599
Cambodia	11.5	1,405	1,218	1,358	1,542
Cameroon	14.2	1,908	1,738	1,496	1,694
Cent Afr Rep	3.6	1,177	1,120	1,093	1,197
Chad	7.3	1,089	959	910	943
Congo (Brazz)	2.9	512	654	610	599
(DemRep/Zaire)	49.0	2,825	2,171	1,305	835
Ethiopia	62.2	635	589	637	720
Gabon	1.2	7,591	6,835	6,607	5,539
Gambia	1.2	2,184	1,718	1,616	1,755
Ghana	18.4	1,759	1,632	1,786	2,009
Guinea	7.1	3,840	1,839	1,848	2,009
Guinea-Bissau	1.1	660	773	857	720
Haiti	7.6	2,724	2,118	1,461	1,471
Honduras	6.1	2,477	2,378	2,476	2,485
India*	559.9	1,218	1,649	2,063	2,485
Iraq	21.7	7,658	1,359	1,419	2,227
Ivory Coast	15.2	2,272	1,527	1,510	1,491
Kenya	28.3	1,026	1,096	1,070	1,035
Laos	5.0	1,027	1,205	1,468	1,633
Liberia	3.0	1,563	1,389	1,395	942
Madagascar	14.6	1,188	884	815	883
Malawi	9.9	565	543	596	629
Mali	10.3	587	641	753	822
Mauritania	2.5	1,754	1,514	1,591	1,704
Myanmar	47.3	978	909	1,230	1,618
Moldova	4.3	6,912	5,494	2,428	2,455
Mongolia	2.4	1,905	1,959	1,725	1,826
Mozambique	18.6	751	767	717	1,014
Nepal	23.7	987	1,199	1,299	1,471
Nicaragua	4.8	2,985	2,012	1,976	2,239
Niger	10.1	1,306	834	786	781
Nigeria	110.5	1,220	852	831	842
North Korea	21.2	1,595	1,526	1,161	993
Pakistan	135.1	1,228	1,668	1,898	1,948
Papua N.G.	4.9	2,227	2,015	2,528	2,181
Rwanda	8.1	1,332	1,052	882	1,014
Senegal	9.0	1,389	1,403	1,392	1,583
Sierra Leone	4.8	1,071	838	689	487
Somalia	8.2	640	635	599	545
Sudan	30.0	1,390	1,087	1,325	1,633
Tajikistan	6.1	6,912	3,067	1,039	1,167
Tanzania	30.6	441	493	504	548
Togo	4.3	1,855	1,619	1,552	1,440
Uganda	22.2	814	852	1,043	1,268
Vietnam	76.2	1,143	1,225	1,691	2,161
Yemen	16.6	579	768	728	781
Yugoslavia	10.6	6,614	3,635	2,113	2,075
Zambia	9.7	1,156	820	788	801
Zimbabwe	12.2	2,741	2,924	2,755	2,374
TOTAL POPULATION (MILLIONS)		AVERAGE PER CAPITA GDP (PPP RATES)			
		1981	1991	1996	2001
LOSERS	1,668.1	2,279	1,753	1,574	1,642

* Population figure is of losing states in India.

SOURCE: Author with World Bank data

POLARIZATION

feature of the global economy, it's worth thinking about life in such a world. Let me start by acknowledging that the humanitarian case for redressing the root causes of economic divergence is compelling. It may prove sufficiently compelling that the OECD nations decide to make a serious effort to help the strugglers catch up. I'll hold my breath on that one. But the humanitarian case is not compelling enough to persuade the United States and Europe to place more than a very few of the 56 losers in trusteeships.

Turning from the humanitarian case to one of national self-interest, one glimpses the outlines of life in a polarized world. Jacksonian diplomacy can recognize three compelling cases for intervention today in the affairs of weak and impoverished nations: terrorism, weapons of mass destruction and contagious deadly diseases. Genocide may be a fourth – not in Jacksonian terms, but because the media spotlight may rally moral outrage.

Afghanistan demonstrates the fate of nations that both harbor and defend terrorists. More telling – in terms of its lesson for intervention policies – will be the course of United States action towards countries that merely harbor terrorists, not making a vigorous effort at rounding them up. Think Saudi Arabia, Yemen and Sudan.

Iraq could be the defining case for weapons of mass destruction. Successful resolution of the Iraqi threat, followed by national reconstruction, would establish a model for other countries that go the course of weapons of mass destruction. Failed resolution would mean that such weapons become a common ingredient in the polarization brew. Biological and chemical weapons are cheap, and nuclear weapons, while not cheap, are getting more accessible.

Learning from North Korea, other countries may see a payoff from weapons of mass destruction, both to deter the United States and to frighten their neighbors. Unless Iraq becomes a showcase for deterrence, the weapons policy cycle is likely to recur.

HIV illuminates the OECD's reaction to contagious deadly disease. The World Trade Organization Ministerial Declaration, issued from Doha in November 2001, reduced patent protection for HIV drugs. In his January 2003 State of the Union address, President Bush committed \$3 billion a year to fight AIDS, up from \$400 million just three years ago. If a disease as deadly as AIDS and as contagious as influenza ever strikes, the OECD reaction will be even faster and more forceful.

The official response to genocide in Cambodia (two million killed, 1975-79) and Rwanda (800,000 killed, 1994) was shameful indifference. Two explanations: first, the victims were culturally disconnected to the U.S. or Europe; second, the news media were slow to report the slaughter. When genocide becomes real to the citizens of rich countries – as happened in Bosnia-Herzegovina (200,000 killed) – intervention is more forceful, if only as a response to political embarrassment.

Cultural connections between rich and poor nations are strengthening very slowly, but the news media are fast becoming more intrusive. On this score there is qualified room for optimism.

To sum up: living with polarization means intervening against the most dangerous and appalling manifestations, as seen from the rich-country side of the divide. It means Jacksonian intervention with a humanitarian edge. It does not portend a muscular Wilsonian foreign policy – a Marshall Plan and nation building for the numerous strugglers and losers in the world community. 

THE

they are THE Harder they

On July 21, 2002, the telecommunications giant WorldCom filed the largest bankruptcy petition in United States history, which was almost twice the size of the next largest – Enron's. Both bankruptcies resulted in part from flagrant accounting malpractice, and thus marked a broader crisis in corporate governance. Here, we provide ballpark estimates of the costs of this governance crisis to the economy, which may well exceed \$40 billion in the first year.

The collapse of Enron was a special shock, both because of the size of the enterprise and, more important, because the underlying cause was management corruption. Yet at the time it seemed an isolated event; only later did other disclosures make it clear that Enron was the tip of the iceberg. A surprising number of blue chip companies, including WorldCom, Xerox and Bristol-Myers Squibb, which for years were part and parcel of all that symbolized

The Cost of the Crisis in Corporate Governance



*By Carol Graham, Robert Litan,
and Sandip Sukhtankar*

CORPORATE GOVERNANCE

the awesome growth potential of the United States economy, have revealed problems linked to fraudulent accounting.

While Enron in isolation had a limited effect on the stock market, the combined effect of the subsequent scandals put the stock market into a tailspin. By the close of business on July 15, 2002, the Dow was at 8,639, down by one-fifth since March 2002. That same day, the dollar fell below parity

LOSS IN STOCK MARKET WEALTH, %

	% LOSS
Base case, 50% of 3/19-6/24 drop and 75% of drop since 6/24	-16.9
Low proportion of drop attributed to scandal (25%, 50%)	-10.0
High proportion of drop attributed to scandal (75%, 100%)	-23.8

with the euro for the first time since the European currency was issued, amid increasing skepticism about the soundness of United States securities markets.

In part, investors' strong response stemmed from the perception that the scandal touched the center rather than the periphery of the system. Companies misreported their earnings, thereby skewing their price-to-earnings ratios – a measure at the core of most decisions about where and when to invest. It also touched actors at the highest levels of the political system. All of this has taken its toll on markets at home and abroad, and at the same time has reduced the relative advantages of holding stock in United States companies.

While much of the attention to corporate governance has focused on the inadequacy of accounting rules and their enforcement, there

has been little study of the economic costs of the scandals. Such estimates are particularly important at a time in United States history when almost half of all households own stock, compared to a mere 19 percent in 1962. Stock market wealth currently accounts for roughly one-third of household net worth. Moreover, an increasing number of Americans rely on stocks for retirement. Mutual fund shares represented 44 percent of 401(k) assets in 2001, compared with just 9 percent in 1990.

What are the implications of the crisis in governance for American consumers, and for the United States economy more generally? What are the implications beyond our borders at a time when the United States economy plays such a pivotal role in international economic trends? We attempt at least rough answers to these questions.

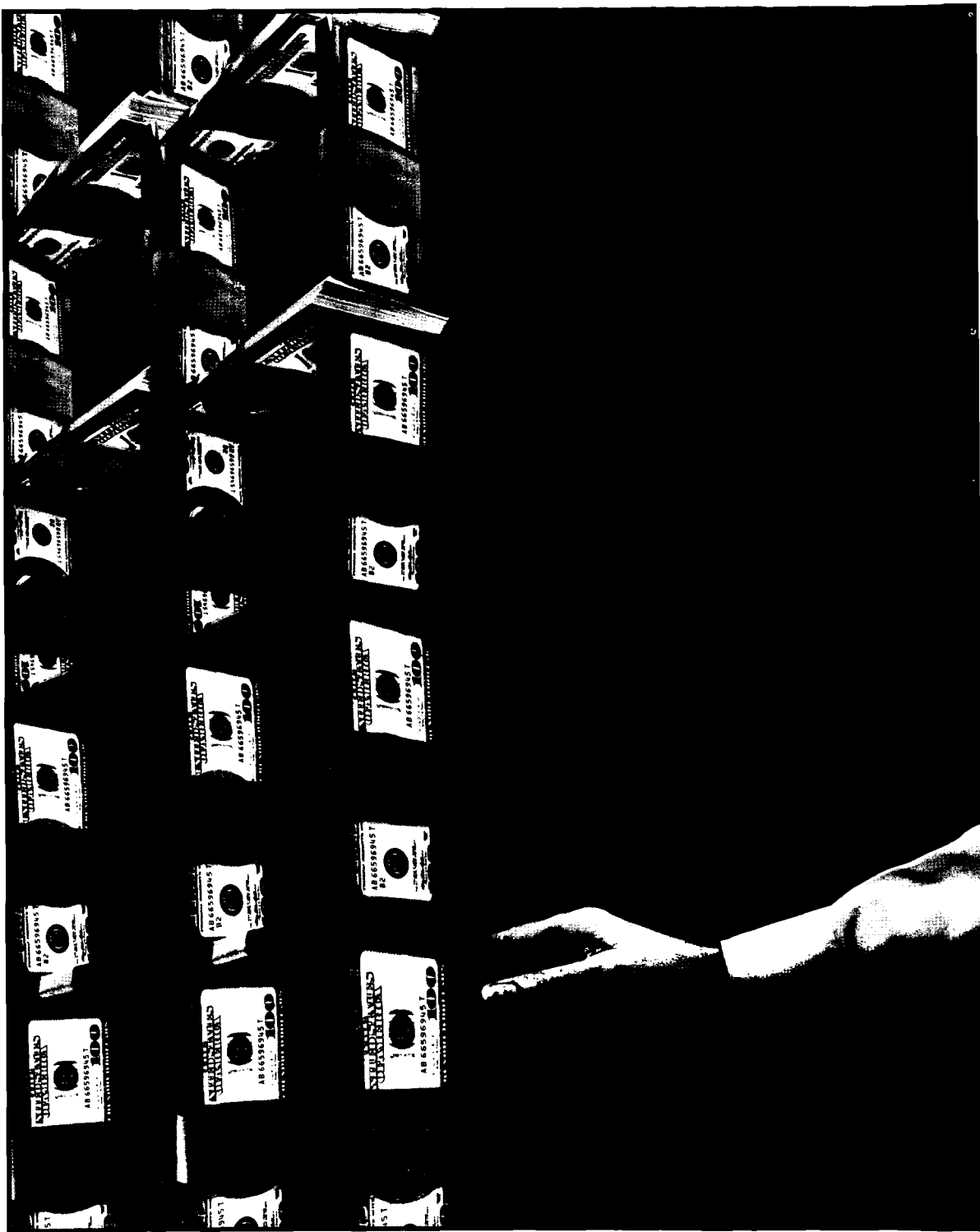
THE CRISIS:

THE COST IN NATIONAL OUTPUT

A sophisticated measure of the economic costs of the crisis would require analysis of the interaction of the stock markets' drops with a host of macroeconomic variables, as well as with actual and anticipated fiscal and monetary measures. Such an analysis would have to be based on myriad assumptions about events and policy. Here, we opt for a much simpler gauge based solely on deviations in trends in stock prices and their likely impact on demand.

Look first at the drop in the market's value. As of August 2002, the Dow had fallen by one-quarter since its post-dot-com peak on March 19 and almost 14 percent since the close of the market on June 24, when WorldCom revised its reported earnings by \$3.9 billion. The broader S&P 500 index lost nearly 28 percent and 15 percent respectively from

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CORPORATE GOVERNANCE

these two benchmark dates.

In the absence of other obvious causes, we attribute a good chunk of the drop to the accounting crisis. We divide the period since the market peak in March 2002 into pre- and post-WorldCom stages, since the collapse of

Other things being equal, a lower stock market – especially one that is associated with more volatility – should drive up the cost of raising capital, and thus diminish investment. Similarly, investment can be dampened if firms expect lower consumption and more uncertainty in economic conditions, both of which are likely to be associated with a drop in stock prices.

How changes in stock market wealth translate to changes in consumer expenditures is the subject of much debate. While there is disagreement on how large the wealth effect

is or how it plays out over time, most analysts agree that it is real. We adopt the estimate used by the Federal Reserve, which implies that over a period of one year an extra dollar of stock market wealth increases spending by 3.5 cents. The Fed model also assumes that investment would fall 0.8 percent in response to a 20 percent decline in stock market wealth.

Using our calculated base-case decline in stock market wealth that can be attributed to Enron and subsequent accounting episodes, the Fed’s model suggests that if stocks stay down at their July 19, 2002 levels for one year, GDP will be reduced by 0.34 percent (roughly \$35 billion) over the period unless there is offsetting fiscal or monetary stimulus. This estimate is bracketed by a GDP loss of 0.2

FIRST-YEAR DROP IN GDP, PERCENTAGE AND \$BILLIONS

	% OF GDP	\$ BILLION
Base case, 50% of 3/19-6/24 drop and 75% of 6/24-present drop	-0.34	-35.4
Low proportion of drop attributed to scandal (25%, 50%)	-0.20	-21.0
High proportion of drop attributed to scandal (75%, 100%)	-0.48	-49.9

WorldCom sparked the broader crisis of confidence. Under alternate assumptions about the proportions of the decline in stock market value attributable to the corporate scandals, we obtain a base case along with low and high estimates of the resulting loss in stock market wealth. We limit our estimates to the period ending August 2002, since subsequent market fluctuations have been influenced by a host of other factors – notably uncertainty about the timing and impact of a war with Iraq.

Declines in the value of stocks can adversely affect the economy in at least two ways. One is through the wealth effect on consumption: if consumers feel poorer, they are likely to spend less. The second is through the impact of falling stock prices on the “equity premium” and thus on the cost of capital.

THE BIGGER THEY ARE, THE HARDER THEY FALL

MID-OCT 2001

- Enron reports \$1 billion loss, SEC seeks inquiry of operations by financial officer, Enron stocks fall 20%.
- United States attacks against Afghanistan overshadow early events.

LATE NOVEMBER-
EARLY DECEMBER 2001

- Merger deal with Dynegy falls through, S&P downgrades Enron stock to junk status, Enron files for bankruptcy.
- Congressional investigations into disaster begin.
- Stock market worries center around Enron's complex transactions with numerous companies.

JAN 10 2002

- In response to investigations, Arthur Andersen discloses it shredded Enron records.

JAN 22 2002

- Bush speech assails Enron executives who heavily contributed to his campaign.

Market goes down 0.73%

JAN 27 2002

- SEC chair Harvey Pitt announces proposal to require CEO certification of annual reports.

Market goes down 0.08%

percent to nearly 0.5 percent, depending on what portion of the decline in stocks follows from the scandals.

Another way to gauge the impact of the trauma is to estimate what would have happened to stocks had the accounting scandals not occurred. Such projections constitute a hazardous exercise. Nonetheless, it is useful to look at credible prescandal projections as a way of checking the estimates based solely on the stock price drop over three months.

In fact, predictions of stock market trends made in January 2002 and June 2002 (pre-World-Com) anticipated a sluggish market. At the start of 2002, *USA Today* polled investment strategists from leading securities firms for a forecast of the S&P 500. One would have expected these analysts to factor in the effects of Sept. 11, the economic recovery and the Enron bankruptcy case into their forecasts, while not knowing about the full extent of the accounting scandal.

Adjusting for the fact that these predictions were for the full year, the average prediction for the value of the S&P 500 was 1216, a 6 percent increase from the 2001 year-end value of 1,148. The July 19 close of 848 was 368 points – 30 percent – lower than the mean prediction. Under low, base-case, and

high assumptions about the proportion of the difference between the prescandal predictions and the actual trends attributable to the scandals, we obtain estimates of the loss in stock market wealth to be 9, 18 and 27 percent respectively. Applying these numbers to the Fed’s model, the scandal-related costs for the

FIRST-YEAR EFFECT ON GDP USING FORECASTING DIFFERENCES AND FED MODEL

	LOSS IN STOCK MARKET WEALTH, %	EFFECT ON GDP, %	CORRESPONDING LOSS IN \$ BILLION
Base case, 60% of difference between forecast and actual	-18.2	-0.36	-38.2
Low proportion of difference attributed to scandal (30%)	-9.1	-0.18	-19.1
High proportion of difference attributed to scandal (90%)	-27.3	-0.55	-57.3

base-case assumption would be 0.36 percent of GDP – or \$38.2 billion in the first year.

In a related simulation, we made our own estimates of how the market would have fared in the absence of the scandals. We used data for United States, British, German and Japanese GDP, interest rates and stock market values to predict second- and third-quarter stock market values in the absence of external shocks. The difference between the actual and predicted values (the sum of the error terms for the second and third quarters expressed as a percentage change from the first-quarter value) for all of our statistical regressions ranged between 15.8 and 17.3 percent.

Given that the statistical model did not account for the effects of the corporate scandals,

LATE JANUARY 2002

- Global Crossing files for bankruptcy, SEC begins investigations of the company’s accounting practices.
- Accounting practices at Kmart and Tyco International also under the microscope.
- First signs of stock market nervousness regarding accounting scandals, but economic recovery fuels rebound.

MARCH 14 2002

- Arthur Andersen indicted for obstruction of justice.

MARCH 27 2002

- Adelphia Communications discloses dubious practice of guaranteeing loans to executives.

APRIL 1 2002

- Xerox agrees to pay \$10 million fine for overstating revenues by \$2 billion over several years.

CORPORATE GOVERNANCE

the difference between our projection and actual stock prices serves as a proxy for the impact of the shock. Our range of values for this error term is remarkably close to the 16.9 percent estimate that we use for our initial calculations, as well as the 18 percent differ-

OPTIMISTIC AND PESSIMISTIC
ESTIMATES OF STOCK MARKET VALUE

	PESSIMISTIC July 22 Close			OPTIMISTIC July 30 Close		
	% MARKET LOSS	% DROP GDP	\$ BILLION	% MARKET LOSS	% DROP GDP	\$ BILLION
From actual drops	18.7	-0.37	-39.2	13.4	-0.27	-28.0
From forecast differences	19.6	-0.39	-41.1	15.6	-0.31	-32.8

ence between predicted and actual stock market values noted above.

These estimates are based on the drop in the value of the stock market as of July 19, 2002. A more pessimistic estimate of the costs would assume that the market hovers in the post-scandal range for a prolonged period. Using our base-case assumption about the loss in stock market wealth between March 19 and July 22, our estimate for the change in GDP based on actual drops is -0.37 percent, or \$39 billion, in the first year, and based on the difference between actual trends and pre-scandal forecasts is -0.39 percent, or \$41 billion. More optimistic estimates, assuming the volatile market stays in the range of its July 30, 2002 closing values, would be respectively

-0.27 percent and -0.31 percent of GDP (\$28 billion and \$33 billion) in the first year.

A closer-to-home metric of the impact of the scandals is its effect on the value of the typical retirement portfolio. Take, for example, an individual from Washington, DC with the median family income for the region – \$66,888 in 2001 – who had chosen an S&P 500 index fund for her company’s retirement plan savings since 1990, and had been contributing 7 percent of her salary with a 3 percent employer match. At the end of

1999, her 401(k) plan had assets of \$149,371, with a contribution of \$52,166 and a gain of \$97,205. By July 1, 2002, her retirement fund had assets of only \$117,814 (despite a larger contribution of \$68,765) and a gain of only \$49,049.

In addition to what the Fed model has already assumed about the effects of the stock market decline on investment, there may be investment-related trends whose origins are independent of the corporate scandals but still affect the real economy. Investment at present is suffering from what economists at Goldman Sachs call the “paradox of corporate thrift,” in which business investment lags behind other economic activity during the recovery as firms wait to ensure that additions

APRIL 24, 2002

- House passes weak bill on accounting regulations.
- Market down 0.15%

MAY 21, 2002

- Merrill Lynch settles suit with New York attorney general for stock analysts’ conflict of interest case.

JUNE 3, 2002

- Tyco chairman Dennis Kozlowski forced to resign on charges of evading taxes. He is indicted the following day.

JUNE 12, 2002

- ImClone Systems ex-CEO Samuel Waksal arrested on insider trading charges.
- Martha Stewart also being investigated.

to capacity are really needed. Goldman forecasts a 6 percent drop in business investment in 2002 and a modest 5 percent increase in 2003.

The paradox: if enough firms cut costs, the resulting decline in demand can become pervasive enough to undermine the predicted economic expansion. Confidence in predictions of future consumer demand play a role in determining how much companies are willing to invest, and the uncertain environment created by the declining market and the crisis in corporate governance could serve to further undermine investment.

Moreover, the corporate governance crisis has almost certainly discouraged foreign investment in the United States, which has manifested itself in, among other things, a decline in the value of the dollar. Between March 19 and July 19, 2002 the trade-weighted value of the dollar fell by 5.2 percent. This decline was not entirely unwelcome. For while a lower dollar pushes up the price of imports and domestically produced goods that compete with imports, the underlying rate of inflation has been low. Hence any crisis-induced inflationary impact was never likely to lead the Federal Reserve to raise interest rates. Note, too, that a lower dollar encourages foreigners to buy more United States exports, which should offset some of the negative effects of the crisis on demand for domestically produced goods and ser-

LARGEST ONE-DAY DROPS IN DJIA OVER THE PAST HALF CENTURY

DATE OF PEAK	% DECLINE	MONTHS TO TROUGH	YEARS TO RETURN TO LAST PEAK
July 16, 1990	-21.2%	3	0.75
Aug. 25, 1987	-36.1	2	2
April 27, 1981	-24.1	16	1.5
Sept. 21, 1976	-26.9	17	4.5
Jan. 11, 1973	-45.1	23	9.8
Dec. 3, 1968	-35.9	18	3.9
Feb. 9, 1966	-25.2	8	6.8
Dec. 13, 1961	-27.1	6	1.75
AVERAGE	-30.2	11.6	3.9

vices, while helping to contain the current account deficit.

HOW LONG WILL IT TAKE TO RESTORE CONFIDENCE?

Our assumptions about the costs of the scandal suggest that the economic price that we are paying is fairly large and may last for a prolonged period. Just how long is difficult to say, since even now we don't have a full accounting of the scandals. But history does offer insights.

An important distinction here is between V-shaped stock market downturns – those generated by one-shot steep declines, like October 1987, October 1989 and September 2001 – and those we call drip-drip downturns, which are step-by-step declines over a prolonged period of time, as occurred in the mid-'70s and seems to be occurring now. The

JUNE 15, 2002

- Andersen convicted by federal jury.

JUNE 20, 2002

- SEC unanimously approves auditor oversight system.
- Market down 1.34%

JUNE 25, 2002

- WorldCom discloses improper accounting of \$3.8 billion in expenses, fires chief financial officer, SEC announces investigation; stocks begin large and steady decline.

JULY 8, 2002

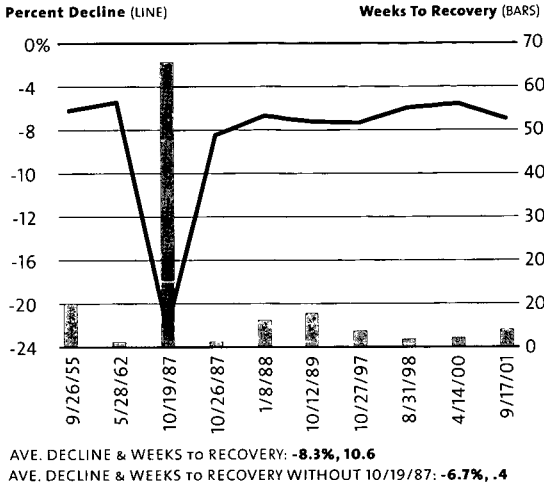
- Merck announces that Medco, a subsidiary, never collected \$12.4 billion in revenues, as reported.

JULY 9, 2002

- Bush gives speech on Wall Street outlining proposals to deal with crisis.
- Market down 2.47%
- Sarbanes bill tightening corporate management and accounting regulations introduced in Senate.
- ↓ Market down 3.39%

CORPORATE GOVERNANCE

LARGEST DRIP-DRIP DECLINES IN DJIA OVER THE PAST HALF CENTURY



record since World War II suggests that the drip-drip downturn results in much slower stock price recoveries. It took an average of 11 weeks for the market to recover its nominal value from one-day drops like those in October 1987, October 1989 and September 2001, but four years to recover from the drip-drip downturn in the 1970s.

To be sure, the worst drip-drip downturn of the postwar era – the one that began in 1973 – was associated with a nasty combination of high inflation and unemployment that is not present today. Nonetheless, the current

market downturn has unique worrisome characteristics of its own: a fundamental loss in public confidence in both the accuracy of reported measures of company performance, and in corporate – and political – leadership.

Indeed, the market failed to turn upward after two major economic addresses by President Bush, the unanimous Senate approval of the Sarbanes-Oxley legislation to overhaul the regulation of corporate governance, and, perhaps most telling, an upbeat speech on the economy by the Federal Reserve Board Chairman Alan Greenspan. Generally, markets head back up before economic recoveries, serving as a leading indicator. In this case, the recovery that seems to be underway could be slowed by the enduring effects of the scandal on the market.

In short, investors want more than words. They want earnings figures they can trust, as well as evidence that those earnings are rising. Continued recovery in the economy should produce higher profits. But restoring confidence in the reported numbers is another matter. In the wake of the Republican electoral victories in November, investors are likely to take a wait-and-see attitude toward all of the reforms adopted post-Enron. How long all this will take is hard to guess.

EFFECTS BEYOND OUR BORDERS

A final effect of the current crisis in confidence – one that has so far received little pub-

JULY 10, 2002

- Judicial Watch files suit against Vice President Dick Cheney for alleged accounting fraud while he headed oil company Halliburton.
- Qwest Communications reveals that it is under criminal investigation by the Justice Department for allegedly violating accounting rules.

JULY 11, 2002

- Bristol-Myers Squibb being investigated by SEC for improperly inflated revenue.

JULY 15-16, 2002

- Senate unanimously passes Sarbanes bill.
- Greenspan gives speech to Senate Banking Committee that is upbeat on economy.

Market down 1.84%

JULY 17, 2002

- PricewaterhouseCoopers announces that it will pay \$5 million to settle SEC case for violating independence rules.

In short, investors want more than words. They want earnings figures they can trust, as well as evidence that those figures are rising.

lic attention – is its impact on market-based economic reforms elsewhere in the world. One manifestation of the scandals is the downward turn in the stock markets in Europe and Japan. Another is a flagging commitment to reforms in numerous developing countries that had viewed the United States as the model.

In a survey of some 18,000 Latin Americans after the Enron scandal broke (but prior to the wider-scale crisis), only 26 percent said they were satisfied with how the market economy was working. Two years earlier, the approval rate had been over 50 percent. One can only guess how much the ongoing crisis of confidence in United States securities markets will erode support for broad-based market reform. But in a region that offers alternatives ranging from the chaotic populism of Hugo Chavez's Venezuela to an ungovernable Argentina, disillusionment with markets should not be taken lightly.

A more tangible worry is how events in the United States will interact with concerns over sovereign debt in Argentina and Brazil – and the possibility of a broader self-fulfilling col-

lapse in confidence in emerging-market securities. While in better times one might argue that the increase in the cost of equity capital in the United States would favor emerging market countries' stocks, instability in Latin America makes such a scenario less likely than one of a more general downturn in the markets. Deeper downturns in the developing economies will in the longer run contribute to the costs to our own economy.

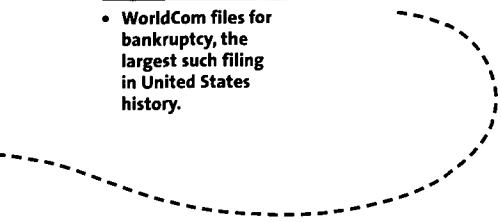
THE POISONED FRUITS OF CRONY CAPITALISM

The best guess is that the crisis in corporate governance will exact sizable costs on the economy. For example, a negative impact on GDP of 0.36 percent translates into a first-year loss of \$38 billion. This is roughly what the federal government is now spending annually on homeland security, or the equivalent to an increase in the cost of oil imports that would result from a \$10-a-barrel price rise.

While GDP growth perked up to an annualized rate of 4 percent in the third quarter of 2002, there is a near-consensus that the recovery remains fragile. Accounting scandals and tumbling stock prices led to slower consumer spending and very sluggish business investment last year.

While the brunt of the wealth loss was borne by the rich, everyone else will pay a price in lost retirement savings and slower growth in living standards – at least until investor confidence in the quality of corporate numbers is fully restored. **M**

JULY 21 2002

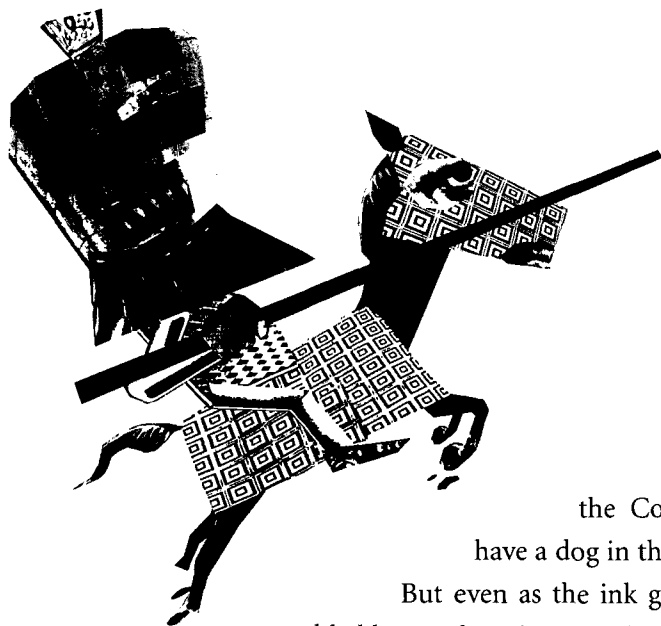
- WorldCom files for bankruptcy, the largest such filing in United States history.
- 

Suppose that, a year ago, an investor dialed up the local Psychic Network to get advice on the hot business issues for 2002. Suppose, further, that Miss Cleo responded, "I see that barrels of ink will be spilled arguing whether those stock options granted to senior executives should be classified as compensation on corporate income statements."

A sensible person would have instantly suspended his credit card payment to the psychic on the grounds that he might be gullible but he wasn't crazy. But what do you know, the psychic would have been right: during 2002, combat over whether to classify options grants as expenses drew in some very big business and economic names.

On the pro-expense-'em side are the financier Warren Buffet, Fed Chairman Alan Greenspan, former SEC Chairman Arthur Levitt, economics Nobelst Joseph Stiglitz, the Financial Accounting Standards Board, Senators Carl Levin and John McCain, and TIAA/CREF, the giant teachers' retirement fund. They duel a don't expense-'em roster that includes the venture capitalist extraordinaire John Doerr, President Bush, former SEC Chairman Harvey Pitt, market gurus Burton Malkiel and William Baumol, Silicon Valley's

Option

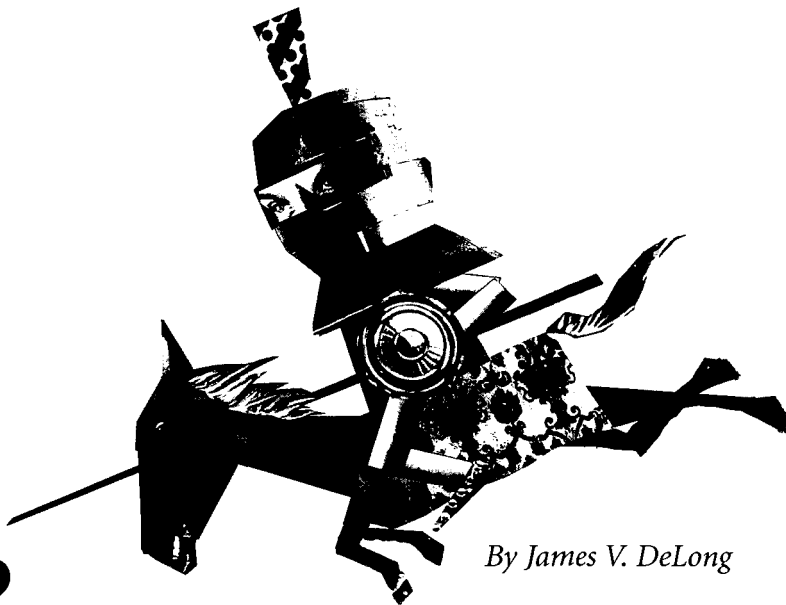


political lobbying arm, Tech-Net, and Washington think tanks like the Competitive Enterprise Institute. (I, too, have a dog in this fight.)

But even as the ink gushed, many thoughtful observers were troubled by one burning question, "Who cares?"

The contention that investors are misled by the failure to treat options as expenses seems vastly exaggerated. Basic data on options is a bit sketchy, but to the extent it is significant, the facts quickly disseminate to the market. Furthermore, for most compa-

Wars



By James V. DeLong

nies, treating options as expenses would affect earnings per share by only pennies. When price-earnings ratios are in the ether, no one believes that this matters much. So why are the pro-expense forces so adamant? We'll come back to that later.

Then, there's the other side. One could object that huge option grants distort managerial incentives, encouraging executives to jazz up stock prices in the short term at the expense of the long term. But this incentive is built into the practice of granting options, and is not a consequence of the accounting treatment. When the market was hot no one objected to liberal stock option gifts, because everyone thought the execs were making them rich. It was only after the fall that virtue reared its head.

The intensity of the anti-expense forces also appears a bit puzzling. Jeff Bezos of Amazon.com was one of the few high-tech chiefs to surrender quickly, reasoning that the basic issues and uncertainties involved in valuing his company would not change and that markets would adapt to the new approach in a microsecond. So why bother to fight it?

Nonetheless, fight it they do, especially along the high-tech axis of Silicon Valley, Austin, Redmond and Boston. The lobbying is fierce, and TechNet (with 200 corporate members) and the American Electronics Association (with 3,000) recently proposed guidelines for improved disclosure of options – a move that is both an excellent idea and a transparent effort to undercut the pressure for accounting rules that require expensing.

OPTION WARS

THE SECRET AGENT PROBLEM

It is an iron law that when the energy devoted to a battle seems out of proportion to the apparent stakes, something else is going on. The options issue actually ties into profound questions about the nature of capital and the structure of business in the 21st century. It embodies serious conflicts between the generators of intellectual capital allied with their gunslinging venture-finance allies on the one hand, and the conventional providers of financial capital on the other. The expense-or-not issue is of modest importance in itself. But it has considerable potential to cause problems – especially with taxing and regulatory authorities hostile to new forms of business organization.

Since the birth of the modern corporation, owners have faced the classic principal/agent problem: managers have some incentives and many opportunities to siphon off corporate resources, either by overt thievery or simply by sinking into sybaritic sloth. They also tend to focus on their narrow areas of immediate responsibility, not on the health of the organization as a whole.

One way to prevent such conduct is to watch the “agents” carefully – and, as Enron/Tyco/WorldCom illustrate anew, this route should never be neglected. But while policing can catch theft, it cannot motivate managers to do their best work. Indeed, policing can be counterproductive, as will be affirmed by any Dilbert confronted by the expense account monitors. (“You can’t buy that pencil until you fill out this form in triplicate.”)

When this was written, JAMES V. DELONG was a senior fellow at the Competitive Enterprise Institute in Washington. He is now a senior fellow and director of the Center for the Study of Digital Property at the Progress & Freedom Foundation, also in Washington.

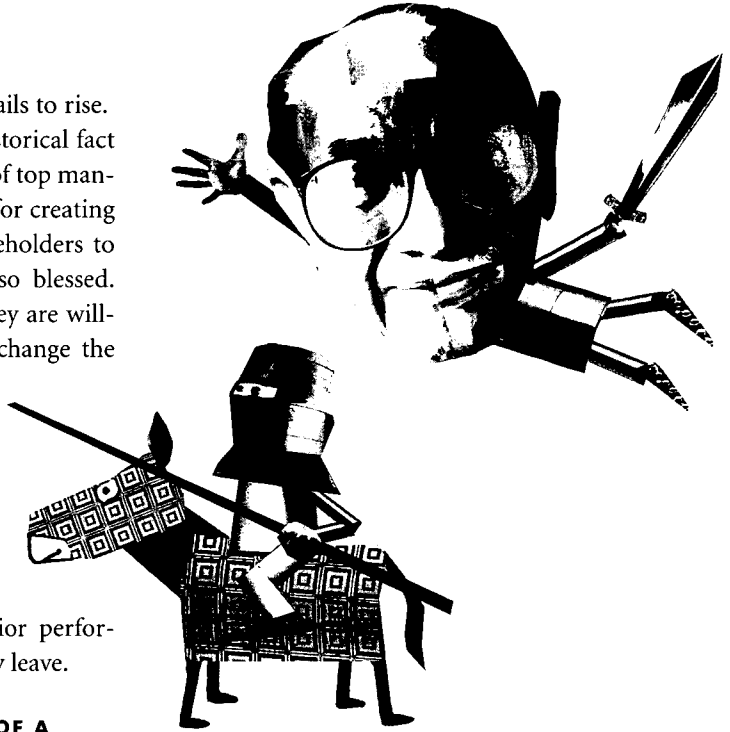
Another technique is to make the managers into shareholders, on the theory that this will keep their incentives properly aligned. Management legend Alfred P. Sloan started a bonus plan, payable in stock, at GM in 1918. Payment in stock is still common, but it presents some problems. For one thing, giving stock to the employees dilutes the stake of the existing shareholders. Employees can be asked to buy shares for their 401(k)s, but may lack the capital to make significant investments. In any case, financial planners are aghast at the lack of diversification that is almost inevitable when someone has both employment and savings eggs in one basket. (Remember Enron?)

One solution is to give an employee the option to buy stock, exercisable in the future but at a strike price equal to the current market price. This gives the employee an incentive to promote the interests of the corporation over the medium to long term, since most options vest gradually and then remain exercisable for some time. The employee need not commit capital: if the stock goes down, the option simply expires. If it goes up, it is easy to borrow the necessary cash at the time of exercise. Also, option compensation has the advantage over direct grants because it does



not dilute ownership if the stock fails to rise.

In the public mind – and as historical fact – stock options are labeled a perk of top management. And given the rationale for creating them, it has made sense for shareholders to limit the number of employees so blessed. Shareholders are not charities. They are willing to dilute their stake only to change the incentives of employees whose performance is both hard to monitor and capable of providing great benefit (or perhaps causing great damage) to the company. Drones can be paid salaries, controlled by supervisors, rewarded in cash for superior performance, and readily replaced if they leave.



THE INTANGIBLE LIGHTNESS OF A MODERN CORPORATION

Embodied in these calculations, however, are assumptions about business enterprise. Most fundamentally, they divide the firm into labor and capital. Even the managers are regarded as hired hands, grudgingly given some status as capitalists only because they can do good or ill and are hard to monitor – not because they are regarded as a source of capital.

But the nature of capital has changed and expanded. In the firm of the 19th or early 20th century, capital was tangible – plant, equipment, land. Today, tangible capital is less important, because key assets often take intangible form as patents, copyrights, trade secrets, customer relations, internal synergies and working arrangements.

In 1978, 80 to 85 percent of the value of debt and equity of public nonfinancial corporations in the United States was represented by the book value of tangible assets. In 1998, before the last great stock market blowout, tangible assets accounted for only about 30 percent. Granted, 1978 was a low point in the

markets, but the shift to the intangible is still impressive. Nor is it limited to New Economy companies. Even automobile makers, long a paradigm of bricks-and-steel investment, are now rich with intangible assets ranging from engineering and design capacity to specialized software for controlling assembly lines.

True New Economy companies, of course, show an even greater swing to intangibles. Microsoft consists of a bunch of nondescript buildings, a few tons of etched silicon, some incomprehensible scratchings called software code that are protected by copyright and a few googles of neurons dwelling in employees' skulls. In 2002, Microsoft will invest \$5 billion to produce more assets, and these, too, will take the form of code and neural connections – not physical plant and equipment.

The rising importance of intangible assets creates a dilemma for providers of monetary capital. Sometimes they can capture the value of the assets completely – that is, pay the programmer, grab the code, and say goodbye. But often they cannot. The code has bugs, the

Valuing Employee Options

From an accounting perspective, options are an odd duck. The company pays out nothing, neither at the time of the grant nor at its exercise. Option grants have no effect on the company's income statement. Their impact shows up in the earnings-per-share numbers and on the shares outstanding on the balance sheet – but not in the account of expenses.

Those who favor treating options as an expense item point out that economic value is being transferred, and that companies would otherwise have to pay out more cash to obtain employees' services. Thus, they argue, failing to include option grants as compensation is deceptive because it creates an impression that labor costs less than is actually the case.

However, this position assumes that the options are awarded for creating earnings during the options period – a dubious assumption. The value of the option depends on the price of the shares at the time of the option's exercise, years after its grant. This value will depend on the market's assessment of the company's earnings prospects in a future that does not begin until years later. Thus, the earnings produced by the employee's efforts in the period

between the grant of the option and its exercise seem relevant only insofar as they predict future earnings. So it would be inaccurate to match the reward with the company's earnings during the period between grant and exercise. Options are awarded as an incentive to the employee to create capital assets that will result in earnings in the future.

One could argue that the options' worth should be depreciated against earnings over an extended period following its exercise, much as a capital asset is depreciated. This is worth considering, but it would have to be accompanied by better techniques of accounting for the creation of intellectual property. This area is, at present, a muddle.

The practical issues associated with valuing options granted to employees are almost as thorny as the theoretical ones. Proponents claim that the well-known Black-Scholes financial option model is adequate to assign a value at the time of the option's grant, and that a fraction of this value can then be charged against earnings each year until the option is exercised or expires.

This proposal has defects. First, there are

users need help, or version 1.0 is only a trial run for the really nifty 2.0.

Obviously, these forces work differently in different companies. The value of Coca-Cola is based largely on the intangible assets of its secret formula and its brand identification, but these are largely independent of the efforts of current employees. Sure, creativity in the lab might produce a new formula, and a continuing stream of novel ad campaigns is needed. But most of the value is "crystallized."

Cisco, on the other hand, lives or dies with the ability of its design teams and other producers of intangibles. The crystallization is less complete. And much of the asset value may lie in the brains of the designers, ready to be applied to the next project, whether at Cisco or elsewhere.

Intellectual capital presents another distinctive problem: it is difficult to appraise in advance. A photograph circulates on the Web that shows the Microsoft staff circa 1978,

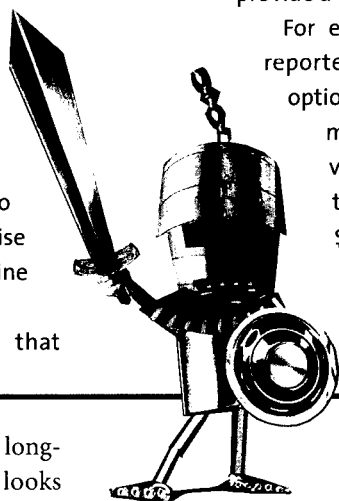
significant differences between ordinary financial options, whose value is often calculated via the Black-Scholes algorithm, and employee options in terms of transferability, duration, price, forfeitability, and timing of exercise. Second, a purchaser of a conventional financial option is an outsider investor; employees receiving options are hoping to profit from the capitalized value of their own future efforts, and are thus in a position to influence the value of the option. Third, Black-Scholes depends on assumptions about volatility, and was developed for use in highly liquid markets – a condition that rarely applies to start-ups or small companies.

These factors make the applicability of Black-Scholes suspect. When Coca-Cola recently announced, with considerable sanctimony, that it would treat options as compensation expense items, it did not simply decide to apply Black-Scholes. It will hire two investment banks to appraise the options, and then combine the two.

Finally, the argument that

expensing options will provide investors with a more accurate earnings number is absurd. A company will be required to make a Black-Scholes estimate when the option is granted. This estimate will then be spread as a cost over the period during which the option is open – say, five years. During that period, the stock will fluctuate in market value. In year five, the option will, obviously enough, be worth something different than 20 percent of the estimate made five years before. Perhaps it will be worthless; perhaps it will be valuable. But it will certainly be different. Nonetheless, investors would be faced with an earnings number that reflected the original estimate. This would make it more a nuisance than a help, since it would have to be stripped out to provide a picture of current operations.

For example, in November 2002, Cisco reported that expensing outstanding options according to Black-Scholes estimates applied as of the time of the various grants would reduce its quarterly earnings from \$618 million to \$250 million. Sound impressive? Not really: over two-thirds of its outstanding options are currently underwater.



when it consisted of 11 long-haired geeks. Bill Gates looks about 12 years old. The legend is: “Would you invest in this company?”

It is tough enough for an investor to evaluate a physical product – a railroad, a store or an entire business – but at least it will clearly have some value once it is built. Moreover, we have accumulated considerable experience in valuing physical assets. Intellectual property is less familiar, and it is often an all-or-noth-

ing proposition. There were probably thousands of group geek shots taken in 1978, but they are not on the Web. They repose in countless attics, along with the photos of grunge bands that never got out of the garage, and recipes for soft drinks that were going to be bigger than Coke.

Indeed, the growth of intangibles is undermining financiers’ ability to assess tangible property. Back around 1996, the press fretted

OPTION WARS

about the forthcoming constriction of the Internet because traffic was expanding more rapidly than fiber optic cable could be laid. Telecommunications companies responded like good capitalists; they binged on construction. Then, improvements in software called wave-division multiplexing multiplied the carrying capacity of single fiber by a factor of 100 or more. By 1999, the companies that had worked so valiantly to wire America were excoriated for profligate overbuilding, and the financial value of their networks went to somewhere around zero. (Note that the actual value is still immense. But it appears that it will be captured by consumers rather than investors, as competition forces prices down to marginal cost.) Thus even if you think your property is physical, it may not be.

THE LABOR THEORY OF OPTIONS VALUE

Plainly, the old dichotomy between capital and labor is getting fuzzy. Companies now have finance capital, workers who produce a mix of intellectual capital and current earnings, and labor drones. Heaven knows where management fits; in the high-tech company of the future, the CEO might be easily replaced, while the chip-design team remains pure gold.

The obvious response to this evolution is to recognize that the work of key employees creates capital as well as immediate earnings, and to bring them into the ownership structure. Stock options are a neat way to do this because they serve several functions at once:

- From the financiers' point of view, an option is better than a direct grant of stock. If the ideas fail, the option holders will have no claim on the residual assets of the company.
- The number of employees who are crucial to success and who cannot be monitored has expanded greatly beyond the category of

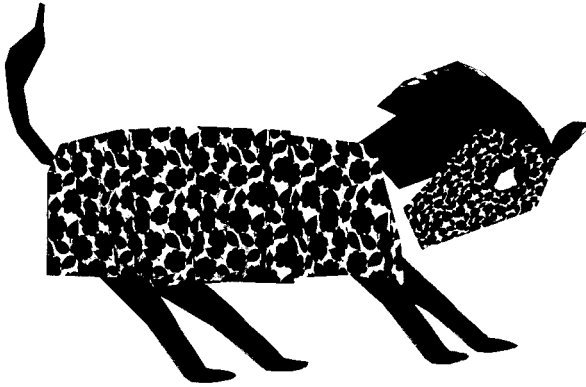
top management. Moreover, the old argument that stock is the way to keep the incentives of workers and financiers in alignment still holds.

- Venture capitalists cannot easily tell whether the nerds who are pitching them are any good. Nor can they tell if the nerds believe their own pitch; they could just be looking for cushy salaries for a few years. To reward only for success, and to calibrate that reward to the degree of success, ensures not only best efforts but the sincerity of the techies' own belief in the enterprise.

- Issues of *de facto* control and legal ownership of capital assets that take the form of intellectual constructs are supremely difficult. For example, the ideas in this article were developed by me partly on my own time and partly while I worked for the Competitive Enterprise Institute. It was written at the Institute's offices. Before it was published, I moved to the Progress and Freedom Foundation. If the article was worth money – say, if it were a software program – who would have the right to the harvest? And who would reap the harvest on the next piece of work, which builds on this one? The smart venture capitalist eliminates the need to worry about such issues by binding the creator to the company with stock options, which reduces the creator's desire to distinguish between his work and that of the company, and thus the temptation to move on.

- Since success and value creation may indeed depend on a whole group working together, options constitute a cross-guarantee among the workers that they believe in the enterprise and are committed to staying. Each is delivering hostages to his or her colleagues in the form of options that would be forfeited through premature departure.

All of these factors explain why the high-tech community so ferociously defends its



ability to use stock options. But it does not explain why it cares so much about the proposals to classify them as expenses.

One reason is obvious: this proposed accounting treatment is misleading. The evaluation methods are erroneous, the time periods are mismatched, and creation of assets is counted as a cost rather than a benefit. Indeed, expensing actually makes the task of valuing New Economy companies more difficult. But, largely thanks to the publicity given the effort, it makes everyone think that accounting has improved.

Another reason is that the effort will be expensive, and perilous. The Financial Accounting Standards Board's pamphlet on accounting for stock-based compensation runs on for 146 pages, and it is written in language that only a lawyer could love. Investment banks will have to be hired. Also, corporate officials are particularly gun-shy at the moment about undertaking new obligations that add to their legal exposure.

Beyond these concerns is the fear of the tax collector. The IRS is not interested in metaphysics of the corporate form or other such nonsense. The law levies taxes on "all income" from whatever source derived. Gains from options are income, and thus a portion

should be rendered unto Caesar. Present tax treatment is an illogical compromise. Nothing happens tax-wise until the option is exercised. At that point, the employee pays tax on the difference between the strike price and the current market value at ordinary-income rates, the corporation takes a deduction of the same amount, and that is the end of it. The employee then owns a capital asset.

The advantage of this treatment is that the employees lay out no cash for taxes until they have the stock in hand, know they have a real benefit, and have an asset that can be sold to raise money if necessary.

If the accountants start requiring corporations to treat options as expenses before they are exercised, who doubts that the IRS will be close behind? Then employees would be required to pay taxes at the time of the grant, on options that might or might not produce any gain. And taxes would have to be paid from current income rather than from gains realized through the exercise of the option.

This would seriously inhibit the use of stock options, and thus seriously undermine incentives in the most entrepreneurial sector of the economy. And who can doubt that the Social Security Administration would probably be way ahead of the IRS, desperate for

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revenues to prop up a failing system, and already on the alert to efforts to convert employees into independent contractors for the purposes of avoiding FICA.



EXPENSE 'EM IF YOU GOT 'EM

These two factors explain the opposition. But what motivates the expense-'em crowd? Why are they so adamant?

One explanation (a charitable one) is that they focus on situations in which option grants do indeed appear to be interchangeable with direct compensation. The application of the income tax to corporate dividends encourages companies to accumulate cash or use it to buy back stock. Either step should cause the stock of a company to rise even if business is stagnant – which, in turn, implies that granting an option can be the equivalent of putting part of an employee's compensation into a tax-deferred account.

To add to the incentive to pay with options, a decade ago Congress got huffy about excessive compensation for corporate executives, so it limited tax deductions to \$1.3 million per salary. Companies began to look for alternative ways to pay their top hands, and options that were almost guaranteed to increase in value (thanks to earnings retention) fit the description nicely.

The number of people in corporate America whose incomes are affected by these factors is pretty small, though. And the obvious response is to change the incentive structures rather than toss out a useful financing device.

A second explanation – one not quite as charitable – is that the expense-'em proponents are fixated on the past, and are thus oblivious to the changing nature of capital. They assume that the classic division into capital and labor still holds; they see stock transferred to labor. And since labor isn't capital, such transfers must be wages. QED.

A third explanation is not charitable at all: proponents have thought about the changing nature of capital, do not like it, and want to stop it. In this view, old-line capitalists are stemming the pressure to share the loot with the creative classes by eliminating the means by which this sharing is occurring. If the peons are creating assets, then, by golly, the assets should belong to the capitalists.

In terms of *realpolitik*, eliminating stock options for the creative classes would help to protect the cartel of old-line providers of finance capital. The availability of options allows the geeks to force the financiers to bid against each other – not in terms of absolute dollar amounts but in the coin of who will give the biggest share of the enterprise to the

idea-people. It also allows the geeks to show their sincerity by reducing their immediate reward in exchange for long-term profits.

If this mechanism were removed from the system, the geeks would lose a powerful bargaining tool, and thus would be able to capture less of the pie. And who gets what they lose? The financiers. And who is disadvantaged, besides the geeks? The venture capitalists, who are far better at playing the game of investing in intangible assets than are the con-

worse is better. Admittedly, worse is usually just worse, but the tech companies made a shrewd move when they decided to reveal the impact of applying standard options-valuation techniques to their earnings. The basic problems will become obvious within a year or two. And if the accounting boards can be staved off for that long, the issue will become ripe for reconsideration. At that point, if there is even a little justice in the world, the expense-'em crowd will have lost consider-

It is no accident, Comrade, that leading proponents of expensing options include giant retirement funds that represent public employees, and conventional financiers like Warren Buffett.

ventional financiers. It is no accident, Comrade, that leading proponents of expensing options include giant retirement funds that represent public employees, and conventional financiers like Warren Buffett.

Clearly, the pro-expense forces have the momentum. Enron, WorldCom, Tyco and their ilk have put impetus behind anything labeled reform. The International Accounting Standards Board is moving to require that options be treated as expenses, and everyone expects that the United States will follow. In November 2002, FASB issued an invitation for comments on its current approach, which encourages, but does not require, the expensing of options. The notice emphasizes the board's dedication to "promoting international convergence" on accounting standards, which the sensibly paranoid Silicon Valley executive will take as a threat to adopt the International Accounting Standards Board's approach.

However, this may be a situation in which

able credibility, and some might even be willing to rethink their position.

Even if companies are not compelled to treat options as expenses, they will remain free to do so if they think the practice improves the understanding of shareholders and of the markets in general. If investors agree, they will reward these companies with lower capital costs. If investors do not find the practice useful, then the reverse will occur; the companies will incur costs for no benefit. Indeed – and most likely – their rivals will be the ones to reap lower costs because the expense-'em approach actually makes interpretation of earnings statements more difficult.

Instead of mandating either approach, The Financial Accounting Standards Board should let the flowers bloom and see which wins in the financial markets. Competition is generally regarded as a good thing. So let's apply it to this corner of accounting, and let Darwin decide. 



Breaking. the Logjam

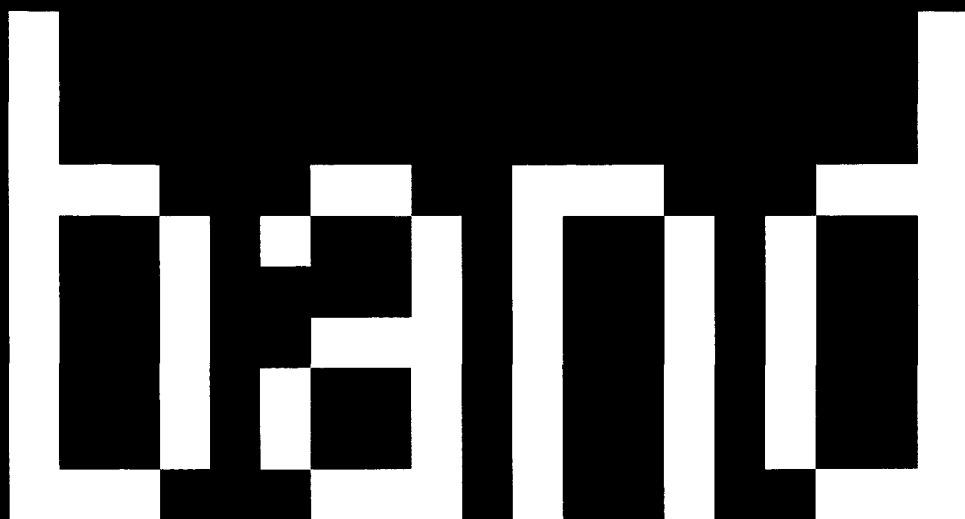
[A Technological Fix]

By Laurence J. Kotlikoff

Like the rest of us, telecommunications policymakers are eager to see high-speed Internet service – broadband, in the vernacular – spread through the country. But to get from here to there, some believe we must choose between competition and speed.

Specifically, they argue that the only way to roll out broadband at a rapid pace is to abandon the pro-competitive provisions of the Telecommunications Act of 1996 (TA96) and hope the regional Bell operating companies – the Baby Bells – will accelerate broadband investment in light of the enhanced prospects for profit.

Supporters of TA96 view such a concession as accepting all the problems the law was meant to fix. They claim this policy would unfairly reward the Baby Bells, which still



dominate local voice and data transmission services, for deliberately thwarting vigorous competition. They also point out that the problem with broadband adoption is not a matter of supply, but demand. Specifically, broadband prices are too high to attract many potential users because competition is weak.

But fortunately, there is a way to stimulate the expansion of broadband without undermining local phone competition – one that would put the Baby Bells and emerging rivals on an equal playing field while minimizing the need for the Baby Bells to provide services to their rivals. The fix involves using next-generation technology to achieve for broadband and local phone service what was done years ago for long distance service, namely to establish electronic switching between providers.

This new technology is not a just gleam in some eccentric engineer's eye. Called ELP (for electronic loop provisioning), it is available now at relatively low cost. "Loop" refers to the local loop – the local telephone lines, telephone poles, underground conduits and switches that connect individual users to the outside world.

The technology would give competitors the same access to customers as the Baby Bells now enjoy. And it would facilitate the process by making it possible to switch customers from one telecom to another – or between voice and data services of one company – with the same speed, cost and reliability as in long distance service.

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Fixing the telecom market has ramifications that range far beyond the sector. Economic growth is increasingly driven by innovations in information technology. Indeed, according to Dale Jorgensen of Harvard, roughly two-thirds of U.S. economic growth in the last decade is attributable to gains in IT. Thus, a vibrant telecom sector is not only vital to the long-term success of the economy, but could also play a major role in ending the current recession.

In assessing the importance of telecommunications to the economy, it is important to note that, since the 1996 law was passed, more than a third of telecom investment has been made by the competing local exchange carriers (CLECs, for short), even though they are only one-fifteenth as large as the Baby Bells in terms of revenues. TA96 requires the Baby Bells to give competitors access to the local loop, but until very recently they have only been able to penetrate the market at very high cost. By no coincidence, the CLECs have concentrated most of their investment in high-use areas.

The Baby Bells seek to eviscerate the 1996 reform, either through legislation or by regulating decree. This would obviously undermine prospects for investment by local competitors. In contrast, implementing ELP would lead to a resurgence of telecom investment and innovation, and get the government out of the business of picking winners—something a free market can do just fine.

FREING TELECOMMUNICATIONS

Baby Bell control of the local loop has meant that, despite the 1996 reform, Americans pay

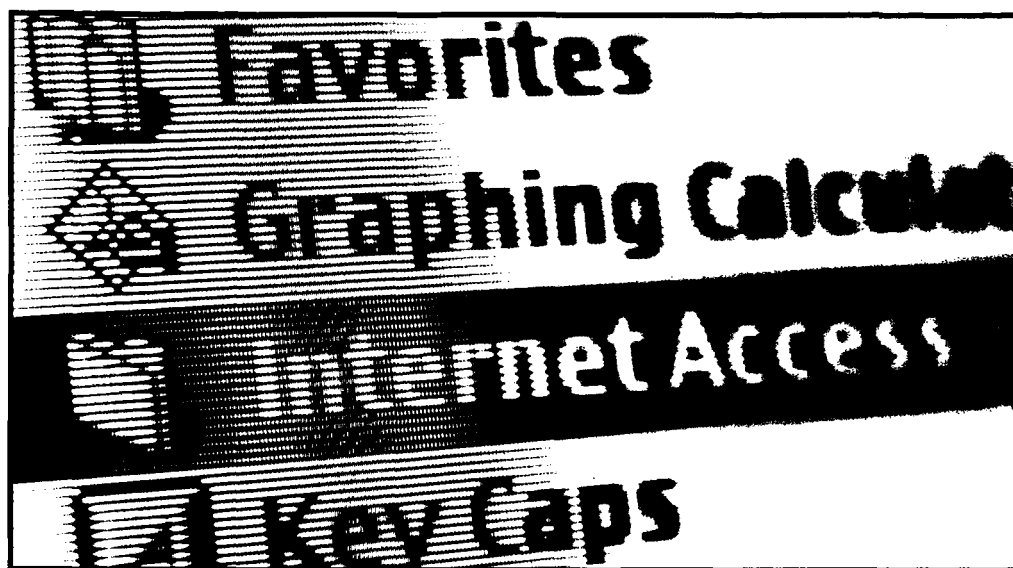
excessive fees for local phone and Internet service. An analogy may help. Suppose Mario's, your local pizza delivery service, were given control of all food delivery on your street. Mario would keep other pizza companies from using the street, or at very least charge premium prices for access. Second, Mario would raise the price it charges for pizza. And third, the pizza maker would keep suppliers of competing goods (think Peking duck and moo shu pork) off your block and start selling these goods to you at higher prices.

In the case of telecom, the local loop is the street, while local phone service and Internet access are the pizza and Chinese food, respectively. The fact that Mario's currently uses the street to deliver its pizza doesn't mean it should be allowed to restrict access by rivals or to charge a monopoly toll. By the same token, the Baby Bells should not be allowed to restrict access to the local loop or to use the loop on better terms than competitors.

The key to sensible policy toward telecom access, then, turns on two ideas. First, providing and maintaining the local loop is a business that is distinct from transmitting voice and data through it. Second, the telecom "pipeline" is what economists call a "public good." Public goods can be enjoyed by multiple parties without cramping any user's style. National defense is the classic example: those ICBMs buried in North Dakota protect all of us. Note that the local loop pipeline differs from national defense in that it is an input to production, rather than an output. Specifically, multiple telecom voice and data transmitters can use the loop without limiting each other's ability to transmit.

One glance at the telephone poles on most streets suggests why almost every neighborhood has a single telecom pipeline provider. Erecting new poles, stringing new wires,

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burying miles of cable and reproducing all the other elements of the local loop, when the current pipeline has plenty of unused capacity, would be incredibly costly and economically wasteful. So, too, would having each state build its own missiles.

There are two ways to ensure that local-loop providers don't restrict access to our main telecom pipeline. One is to separate the two businesses by forming companies that are responsible for upgrading and maintaining the pipeline, but are prohibited from engaging in transmissions. Such structural separation was the hallmark of the decree that broke up the AT&T monopoly and introduced competition in long distance.

Pipeline owners that are barred from selling communications services would have no incentive to favor some service providers over others. Of course, the pipeline company would have a monopoly on the pipe, so the tariffs for its use would still need to be regulated in order to prevent above-cost pricing.

ELP offers an alternative way to ensure access to the loop on equal terms, and thus a way to stimulate competition and telecom investment. With ELP technology, switching a

customer from one local voice and data transmission company to another would be done simply by typing commands on a computer keyboard. Similar access architecture was the key to promoting vigorous competition in the long distance telephone market, which delivered spectacular reductions in Americans' long-distance telephone charges and equally spectacular technological innovation in the long distance networks. Indeed, the speed, accuracy and low cost of long distance electronic switching, plus the ability to lease cross-country wire lines and other facilities from long distance companies, explain why the Baby Bells are entering that market. In doing so, the Baby Bells are conveniently forgetting that what's good for the goose is good for the gander.

Unlike structural separation, ELP would require no divestiture of assets by the Baby Bells. Nor would its implementation require a change in the law; on the contrary, ELP provides a means of making the 1996 reforms work as originally intended. Before describing ELP, though, it's worth a digression to outline the provisions of TA96, the font of most of the current problems in telecom policy.

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THE TELECOMMUNICATIONS ACT OF 1996

When AT&T was broken up in 1984, control of the local loop was assigned to the Baby Bells. This assignment was exclusive; divestiture made no provision for competition in local voice and data services. A dozen years later, TA96 loosened regulation of the local telecom market by eliminating the Baby Bells' status as monopoly franchises and by requiring them to rent access to the local loop to would-be competitors. The law further required the Baby Bells to rent access to the local loop on a component-by-component – or “unbundled” – basis according to the needs of their competitors. Finally, rents were to be set to include a fair profit for the Baby Bells.

The Baby Bells were told that if they fulfilled their obligations to competitors, they could enter the long-distance market. This led them to begin lobbying to open long distance service. But in the meantime, the Baby Bells used a variety of mechanisms to restrict access to the local loop. Tactics included charging exorbitant prices for unbundling components; delaying the transfer (or “hand-off”) of loops from their switches to those of competitors; using slow, error-prone manual handoffs rather than electronic handoffs; charging high prices to competitors for renting physical space in local phone company offices to collect these loops; and even opting to pay fines rather than obeying the law.

While close to 500 telecommunications companies entered the local market after TA96 was passed and collectively invested more than \$50 billion, most had closed their doors by the end of 2000. This is the bad news. The good news is that the local competitors' dark tunnel is finally omitting a ray of light. In the last year and a half, the surviving CLECs have begun to get some traction

because state public utility commissions have permitted them to rent local phone company facilities on a comprehensive “UNE-P” basis rather than piecemeal.

UNE-P stands for “unbundled network element platform.” Under UNE-P, the Baby Bells are required to use their facilities to place the calls of local competitors' customers. The CLECs compensate the Baby Bells at wholesale rates for this service along with providing support and billing services for CLEC customers. UNE-P was established because (a) there is currently no way for the Baby Bells to transfer local competitors' customer calls electronically; and (b), as indicated, the Baby Bells have made the manual transfer of CLEC customer calls to CLEC networks an economic nightmare.

THE REAL PROBLEM WITH BROADBAND PENETRATION

Much of the impetus for reversing TA96 follows from the concern that high-speed Internet access is being deployed and adopted too slowly. The dominant providers of broadband are the regional Bells, with their digital subscriber line (DSL) connections, and the cable television companies, with cable modem hookups.

Two-thirds of American households have access to cable, and a growing share of their cable companies are offering Internet connections along with television. Thus, today roughly 70 percent of households can purchase DSL-based or cable modem broadband service. In addition, somewhat slower satellite hookups are available to most households. Hence, the fact that fewer than 10 percent of households are purchasing broadband suggests that the problem is not the availability of service, but its value and price. Broadband is priced high, both because the regional Bells have blocked competitive access to the local

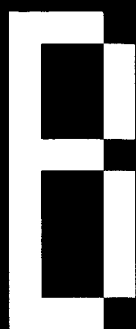
loop and because of the spaghetti-wire complexity and antiquated manual processes used in maintaining the loops.

CURRENT POLICY

In Washington, the FCC seems poised to rule that the flow of data (Internet transmissions) over fiber-optic lines is an information service and, therefore, subject to neither FCC

Given that the Baby Bells are now being allowed to enter the long distance market, the two likely FCC rulings could lead to a Baby Bell monopoly of long distance as well as local telephone service and, in conjunction with local cable companies, a “duopoly” in the provision of broadband service.

How’s that? If existing long distance companies as well as local competitors cannot get



roadband is priced high, both because the regional Bells have generally blocked competitive access to the local loop and because of the spaghetti-wire complexity and antiquated manual processes currently used in maintaining the loops.

regulation nor the 1996 law. Two bills introduced in the last Congress and likely to be reintroduced in similar form – the Tauzin-Dingle bill in the House and the Breaux-Nickles bill in the Senate – would legislate this same “solution.” Moreover, as this article was being written, the FCC was poised to issue a ruling that eliminates all or most UNE-P rental by the Baby Bells’ competitors.

The Baby Bells are putting enormous pressure on the government to “fix” their market because over the past 18 months local competitors have begun to attract customers by offering lower prices. The challenge to the local phone monopoly comes thanks to the reasonable UNE-P rates set by state public utility commissions in conformity with a recent Supreme Court ruling. Indeed, roughly 10 million households and small businesses have already signed up for local phone service with Baby Bell competitors at cost savings of up to one-third.

economical access to residential and small business customers to sell local phone and broadband service, the Baby Bells will have them over a barrel. All the Baby Bells need do is offer an all-in-one package of local phone service, long distance service and broadband, and, voilà, they will have a product that no one can match. Furthermore, they can throw in the long-distance component at no charge to ensure that no customer would seek to purchase long-distance from other providers. AT&T, Sprint, MCI and all remaining local competitors would be history. And, once they are gone, we can say goodbye to all the money we have been saving on phone bills.

The FCC and many members of Congress seem unconcerned, either because they have not thought it through or because they think the Baby Bells will face broadband competition from cable and phone competition from the wireless companies. At best, this is wishful thinking. Leaving the Baby Bells and the cable

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companies with a broadband duopoly is an invitation for collusion.

Don't think of cell phones as a viable alternative. They do not work very well even when you are lucky enough to get a connection, and there is no indication that cell phone service will improve anytime soon. Besides, if the Baby Bells are allowed to control all land-line

doing so would deliver broadband service at a faster pace. But, as discussed above, the real impediment to greater use of broadband is its low adoption rate, not its availability. Adoption rates for high-speed Internet services cannot be dictated in Washington. It's up to the public to choose to pay for a hookup.

In making the decision to buy broadband, the public considers two things: value and

Don't think of cell phones as a viable alternative. They do not work very well even when you are lucky enough to get a connection.

phone service, what's to prevent their taking over cell phone service as well?

One might rationalize the emasculation of TA96 if the Baby Bells were constructing new pipelines from scratch. But what is mostly involved here is more of same – an expansion of capacity where capacity already exists. The Baby Bells as well as their competitors have been deploying high-capacity cable in portions of the local loop for more than a decade. Hence, the addition of fiber is nothing new, and certainly does not suggest a discontinuity that demands new rules.

Competitive markets deliver goods and services at prices that equal the long-run incremental costs of producing them. Markets dominated by small numbers of companies set prices that are higher than incremental cost. This is particularly the case for must-have commodities, like local telephone service, where the demand is inelastic.

Those promoting a shared monopoly in broadband (and, by implication, a monopoly in local voice transmissions) also claim that

price. And while Tauzin-Dingell, Breaux-Nickles or an FCC ruling would do nothing to make broadband more useful, it would enable Baby Bells to set prices above competitive levels. Thus, well-intentioned proponents of pro-Baby Bell legislation are likely to get exactly the opposite of what they expect – a decline, rather than an increase, in deployment of high-speed Internet services.

REREGULATING TELECOM?

The telecom bills in Congress or the above-mentioned FCC rulings would not only be anticompetitive, they would roll back the clock with respect to deregulation. For once the public understood that it is captive to the Baby Bells plus the cable companies, the pressure for re-regulation would build.

When done right, deregulation has worked extremely well, delivering huge savings to consumers and substantial productivity-enhancing investment in the economy. Deregulation of long distance phone service, as well as airline, rail and trucking services, has

worked for two reasons. First, the services were not natural monopolies. Second, policy-makers made sure they had the right institutions in place – namely, a free market – before pulling the regulatory plug.

Local voice and data transmissions are not a natural monopoly, so the first of these preconditions is satisfied. But the second precondition for successful deregulation – a market with easy entry – is far from satisfied. Deregulating local telecom in the current setting would permit the Baby Bells to shut down many of their remaining competitors. By contrast, were ELP implemented in a manner that treated all transmitters identically, we could significantly reduce the need for regulating local phone service.

ELP TO THE RESCUE

To appreciate the opportunity here, one needs to grasp the mechanical obstacles involved in deploying broadband over the local loop, given the current network architecture and the reluctance of the Baby Bells to cooperate. Simply giving a local competitor access to a single telephone line running from the client's home to the Baby Bell central office entails an elaborate multi-step process, including physically identifying, disconnecting and reconnecting the client's telephone wires. Moreover, to be able to receive a new customer's line, the competitor needs to set up its own equipment in the local phone company's central office. This takes time, hardware and lots of money to pay the rent.

Strikingly, the cumbersome process for handing off loops to local competitors is similar to the process that a Baby Bell must go through when it wishes to provide a customer with its own broadband service, or needs to rearrange its customers' voice services. Thus, an automated process that could set up and cross-connect both voice and data circuits

electronically could benefit the Baby Bells as well as local competitors. First, it would make the provision of unbundled loops far cheaper and more economical for the supplying Baby Bell as well as the receiving competitor. Second, it would provide the Baby Bells with operational efficiencies in providing both current services. And third, it would remove foreseeable technical barriers to providing advanced services to customers.

ELP would locate next-generation digital remote terminals in each neighborhood and business district. These terminals would convert voice and data communications to and from digital streams and place them in packets called ATM (asynchronous transfer mode) cells, which are analogous to letter envelopes. These data envelopes are densely packed onto a shared fiber wire that connects to a switch. Much like the sorting facilities of the post office, the switch sorts the cells by service-provider network and sends them on their way. The set of voice and data packets of a particular customer is called a "permanent virtual circuit," which serves much like a postal address in identifying the sender and recipient of the transmission.

The local baby Bell network as well as each local competitor's network would be connected to the switch, which need not be located in a central phone company office. This would permit the switch to direct the digital packets associated with any particular address to the customer-selected local voice or data network. Changing a customer's service to include data, or changing a customer's service provider, would simply require sending electronic instructions to the switch. Thus the laborious, error-prone process of identifying a client's telephone wires and physically moving them from one provider's switch to another's would become a thing of the past. Moreover, with this new architecture, local

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competitors would not need to set up equipment at every central telecom office – but only at the ATM switch, which would serve a collection of neighborhoods.

ELP can deliver broadband speeds 30 to 100 times faster than current rates. It could thus lay the groundwork for video streaming and other killer applications on which Wall Street has been counting.

IMPLEMENTING ELP

Much of the infrastructure for ELP is either in place or slated to be installed in the form of fiber lines running from Baby Bell central offices to next-generation remote terminals. Using these resources, which requires Baby Bell participation and cooperation, would greatly reduce the cost of implementing ELP. Indeed, all that is needed beyond this infrastructure to make ELP a reality is software and hardware that bundle voice and data in digital packets at the remote terminal so that they can be routed to the customer's vendor. In the longer run, a fiber ring connecting remote terminals could, in large part, replace central offices and achieve additional cost savings.

Unlike UNE-P-based competition, ELP would allow service providers to retain full control of their networks. This would give the Baby Bells more incentive to develop and invest in their networks. But eliminating UNE-P should occur only after ELP is in place and functioning smoothly. Otherwise, the Baby Bells would be able to kill off their competitors before they get a chance to use ELP.

THE PATH FROM HERE

The Telecommunications Act of 1996 was adopted for a good reason. The Baby Bells had a tight grip on local phone service and were poised to share monopolies with cable

companies in delivering high-speed Internet service. But inadequate enforcement, Baby Bell recalcitrance, and the inherent limitations of current technology undermined the 1996 reform's potential for stimulating competition. Indeed, apart from the very recent UNE-P-based competition, the telecom market is less competitive now than when the Act was passed.

TA96 asked the Baby Bells both to compete with their competitors and to help them. They have done what any red-blooded American company would do – use control of the local loop to block competition. Now that UNE-P prevents them from playing this game, they have embarked on a campaign to eliminate this vestige of competition.

Reforming the 1996 law could take one of three paths. The first is to eviscerate the law through legislation or FCC decree. This would allow the Baby Bells to circumvent the requirements of TA96 under the pretext of breaking the logjam over broadband coverage. The second path is separation of the local loop pipeline business from the pipeline transmissions business. The third path is adoption of Electronic Loop Provisioning technology by encouraging investment in ELP technology and enforcing the law so that this new technology is made available to the entire industry. Path 1 would lead us back to where we started – control by one or two companies in each regional market. Paths 2 and 3 lead to the information superhighway that the country needs.

To me, ELP technology, with its relatively low costs and efficiencies, seems the path of choice. ELP can transform the local loop from a bottleneck that restricts competition into a basin that attracts it. We need that competition if the nation's telecommunications industry is to regain its role in propelling economic growth. 

Clusters of Creativity

BY ROB KOEPP

Rob Koepp is a research fellow at the Milken Institute, working in the regional and demographic studies group. But as *Clusters of Creativity: Enduring Lessons on Innovation and Entrepreneurship From Silicon Valley and Europe's Silicon Fen* makes very clear, he is no ivory tower analyst. The book, a comparison of Silicon Valley to Europe's premier technology cluster (in Cambridge, England) is a rich mix of anecdote, institutional history and policy analysis that shows cluster-building to be much more than an accident of history or location. Indeed, Koepp argues that while every successful technology cluster is unique, there is no way to create or sustain one without the help of exceptional managerial leadership. ¶ Koepp, by the way, is a man of many talents. An MBA from Cambridge who is fluent in both Japanese and Mandarin, he spent much of the last decade working on high-tech business projects in Asia. Among other assignments, he directed Dresser Industries' division in Japan and structured Dresser's technology alliance with Sharp Electronics.



— Peter Passell

If names are anything

to judge by, they show just how eager people are to capture some of the magic of Silicon Valley. Among the mountains of Austria now protrudes a Silicon Alps. A swath of Silicon Tundra can be found in the frigid latitudes of Canada. An industrial oasis known as Silicon Wadi graces the arid landscape of Israel. The dikes of the Netherlands protect a Silicon Polder. The high-tech workshop of the world, Taiwan, is known as Silicon Island.

Areas lacking the identifiable geology for siliconization simply localize the title. Bangalore is called the Silicon Valley of India, while Singapore and Penang vie for recognition as the Silicon Valley of East Asia. Although the United States is already home to the original Silicon Valley, the country is full of attempts to gain fame through association. Witness Silicon Bayou, Silicon Glacier, Silicon Gulch, Silicon Hills, Silicon Hollow, Silicon Mesa, Silicon Prairie, Silicon Sandbar and even Silicon Swamp. Perhaps the ultimate compliment to the Valley – an area not so long ago looked down upon by the more cosmopolitan regions of America as an agricultural backwater – is that Manhattan now calls its concentration of Web-design firms Silicon Alley.

As computer networking guru Bob Metcalfe put it, “Silicon Valley is the only place on earth not trying to figure out how to become Silicon Valley.” The observation captures the alluring yet elusive nature of Silicon Valley’s magic. The rags-to-riches success stories, technological home runs, gee-whiz gadgetry, explosive business growth, headline-grabbing corporate feats, and, most of all, the extraordinary wealth generated by the cluster, make it the ultimate technopolis in a technology-driven world.

The Valley may be a world apart, but it is

still very much of this world. A melting pot of people and ideas, the cluster has since its beginnings thrived as a magnet – not an island. The Silicon moniker has stuck for several decades, but belies the origins of a vibrant, ever-changing regional economy – one that has moved far beyond the genuinely “silicon” activities of chip- and computer-related manufacturing. Silicon Valley is more an economy of concepts than of products, more of entrepreneurship than technology per se. The Valley is most celebrated – and subsequently suffers from the excesses of overconfidence – during high-tech booms. The dot-com bubble that swelled during the final years of the 20th century is but a recent example.

Yet one of the repeatedly demonstrated strengths of Silicon Valley entrepreneurs is the ability to lead the local economy out of the doldrums, to seize new opportunities in the face of general decline. Indeed, the area’s enduring strengths are in many ways best appreciated when the cluster is challenged – not when it is riding the latest technology wave.

Lurking within the names of all those Siliconia geographies is the implicit notion that they are just knock-offs of the original, distinguished mainly by physical features – fen, island, wadi, glen, beach, whatever. The name associations might make for good mar-



keting, but they gloss over the endogenous forces that contribute to the particular management creativity driving these very different clusters.

There is also the issue of how Silicon Valley

and other high-tech regional economies came to be. Some argue that the emergence and success of Silicon Valley was an accident of economic nature. The implicit message: clusters are really not so special after all, but are



economic geographies created by the luck of “first-mover” advantages and anonymous cumulative processes that, once begun, follow a destined path-dependent trajectory. Thus, the role of leadership in guiding these clusters receives little consideration.

At the other extreme is the notion that Silicon Valley has all the answers – that the region has produced a superior, culturally based system of networks that enables the cluster to defy the mortality inherent in industry- and product-based life cycles. It follows that Silicon Valley is unique – that it has found a way to beat out observed realities of managerial capitalism. Accordingly, the Siliconia of other regions are admonished to emulate Silicon Valley’s networking culture and to implement its radical new model for enterprises and industries.

This book focuses on two outstanding Siliconia: the original Silicon Valley and

Silicon Fen, the high-tech cluster radiating from Cambridge, England. Their success is not merely a matter of accidents or networks. Indeed, the clusters can only be understood if one comprehends how management practices have facilitated their particular brands of innovation and entrepreneurship.

The inclusion of Silicon Fen does more than add international balance. The Cambridge cluster qualifies as the most innovative and entrepreneurial silicon landscape outside the United States. While well known in Europe, it has a relatively low profile elsewhere in the world – this, ironically, despite Cambridge’s unsurpassed importance in the history of modern

science. A comparative analysis of how and why Silicon Fen exists and the reasons that, in spite of its manifold advantages, Cambridge has gained less recognition, puts in perspective the factors that really matter in a vibrant industrial cluster.

BREAKING WITH CONVENTIONAL WISDOM

Paul Krugman of Princeton University, probably the most visible economic pundit alive, emphasizes the role of increasing returns in industrial clusters – that once a cluster gains a certain mass, it grows like a snowball rolling downhill. Clusters are thus born and develop because an accident leads to the establishment of the industry in a particular location, after which time cumulative processes drive growth. Not surprisingly, then, Krugman dismisses Silicon Valley as a location that “is not at all unique, either in time or space, but is

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simply a glitzy version of a traditional phenomenon.” Indeed, he concludes that “the new high-technology clusters were the product less of intrepid individuals than of visionary bureaucrats (if that is not an oxymoron).”

Attributing key characteristics of an economy to matters of chance risks glossing over the complexity of forces at play. What matters is not the accident itself, which may have started the proverbial ball rolling, but how growth is guided thereafter. What is crucial to a cluster’s development is not happenstance, but rather how people respond to opportunities – or, perhaps more accurately, create opportunities.

The Cambridge cluster’s origins are surprisingly similar to those of its California counterpart; at the same time that Silicon Valley was gestating, Cambridge was benefiting from its own visionary bureaucrat, a university-affiliated science park, a flourishing high-tech industrial base, and a large pool of knowledge workers

Yet Silicon Fen has gained nothing like the economic weight of its American cousin. Accidents don’t explain the difference, but the effectiveness of management does. Managerial thinking and behavior, not

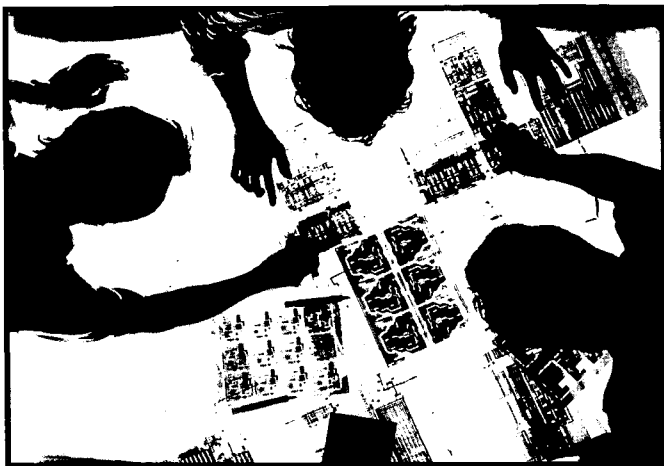
chance, lie at the heart of the phenomenon of Silicon Fen and its differences with Silicon Valley.

Like assumptions about the deterministic powers of cumulative processes, assumptions about Silicon Valley’s fabled culturally based system of networks also subordinate the importance of human agency to the workings of external forces. It’s not hard to see why variations of a network-über-alles perspective frequently inform interpretations of Silicon Valley. The area’s skilled workers usually have friends and acquaintances in a wide number of local companies, and the turnover rate for employees at high-tech firms is substantial. Employees will recognize a competitor as not only being staffed by friends, but view it as a potential employer.

These human linkages open economic opportunities and support a live-and-let-live attitude amid an environment otherwise characterized by cutthroat competition. Diverse enterprises are also often bound together, sometimes through strategic intent. For example, Silicon Valley’s leading venture capital firm, Kleiner Perkins, fosters synergies among the companies in which it invests, in the style of Japan’s *keiretsu* networks.

Moreover, local companies will often choose to become intertwined because they see advantages in integrating supply chains. These aspects of business life provide a strong sense that the cluster is a collection of “virtual

businesses” without clear boundaries. It is important, however, not to confuse the nature of causality in appreciating the role of networks; they are byproducts, not the origins, of the region’s entrepreneurial dynamism. And just as the euphoria that surrounded Internet businesses exaggerated the value of computer networking to ridiculous extremes, so, too,



has the role and value of personal networking in the Valley been exaggerated.

Undeniably, networks can greatly aid innovation and enterprise, but no evidence has ever surfaced that they can replace people or firms as what one analyst called the “locus of economic activity.” Nor does anything suggest that sectors as tightly networked as those in Silicon Valley have found ways to reorganize automatically according to changing market conditions. One need go no further than the crash-and-burn recession of 2000 to see that the Valley is not immune from market cycles.

SILICON VALLEY DYNAMISM

The dynamics of Silicon Valley are a challenge to describe. Dominant industrial activity in the cluster has evolved rapidly and changed frequently. During World War II and the postwar era, for example, defense work drove

growth. From the 1960s, when the area came to be known as Silicon Valley, semiconductor firms helped expand the cluster and lead it in new directions – as did computer and computer-related companies from the late 1970s on. In the latter half of the 1990s, new Valley firms (and existing firms that reoriented themselves) emerged as leaders of the computer networking revolution, and thereby arose as the key enterprises of the cluster.

Thus the defining features of the cluster’s dynamics evolve according to the mix of industries in ascendance. To explore the most contemporary aspects of Silicon Valley’s dynamism, I examine the Internet boom and the thinking of its promulgators.

Hype and Substance

It is hard to be charitable in assessing the errors of logic that fed dot-

com mania in the Valley. For all the craziness, though, the follies need to be viewed in perspective. Internet euphoria took hold in large part because the Valley had enthusiastically embraced computer networking long before other clusters awoke to the possibilities of the technology. Such dedication to new opportunities, shared across a wide range of Valley enterprises and workers, remains a defining strength of the cluster.

Although the cluster’s history did not – as increasing-returns theory argues – make Silicon Valley what it is today, Silicon Valley’s past does show how local entrepreneurs have repeatedly distinguished themselves by seizing opportunities that others ignore and finding creative solutions to problematic market conditions. For example, with regard to market downturns, in 1992 Silicon Valley fared especially badly as California wallowed in its

worst recession since 1941. With cutbacks in military spending following the end of the Cold War, the Valley's unemployment rate soared to 7.4 percent.

Silicon Valley was able to bounce back because the cluster was not coasting on the cumulative processes of its past but had been expanding in new directions. The area's entrepreneurs had altered course. In the 1940s, they took advantage of a surge in military spending to kick-start the Valley's high-tech economy. Fifty years later, the military-industrial complex was in retreat, yet the overall impact on the cluster was temporary. For in the decades since World War II businesses in Silicon Valley moved away from defense work, better positioning the cluster to weather the effects of defense cutbacks.

Indeed, between 1992 and 2000, Silicon Valley added tens times as many jobs in other fields as were lost to defense-sector layoffs. How, exactly, Silicon Valley will recover from the latest downturn is unclear. Still, it is possible to analyze the weaknesses of the cluster that contributed to the irrationality of the boom and the strengths that will lead it forward. To appreciate the sheer robustness of the Valley's economy requires differentiating between the hype and substance of its latest technology craze.

Netting the Future

The origins of the Internet, the defining institution of the latest high-tech wave to sweep the Valley, stretch back to a communications network championed in the 1960s by Robert Taylor, a civilian director in the U.S. Department of Defense's Advanced Research Projects Agency (ARPA). Taylor sought to link the computers of ARPA-funded research cen-

ters at universities and other contractor sites through a system dubbed ARPAnet.

Despite the simplicity and logic of Taylor's proposal, the initiative was in many ways quite extraordinary – and controversial. Computers in the 1960s were hulking fortresses of circuit boards, spaghetti mazes of wires, and whirring reels of magnetic tape.



Computing resources stood isolated and underutilized because transferring data between computers was virtually impossible.

Taylor's concept for wide-area computer networking offered the promise of turning this around. Yet outside of the Western United States, the idea was shunned. In the end, only four research centers agreed to participate in the ARPAnet launch, three of which were in California: UCLA, UC Santa Barbara, and the Stanford Research Institute. The fourth, the University of Utah, hailed from a neighboring Western state.

Ironically, the critical hardware and software for the ARPAnet came from the east coast, principally from Boston's Route 128 technology cluster. Some would argue that a culturally rooted myopia led to Boston's failure to seize the opportunity the ARPAnet offered. The real issue, though, was more one

of resource management and structural preparedness than of cultural bias. Computer science research and education at the Ivy League universities, especially Harvard and MIT, was conducted in ivory tower enclaves. They strove to protect their well-endowed computing resources, not to share them.

The less-well-funded research centers in the West, by contrast, were receptive to the ARPAnet's core ideal of resource diffusion. One center in particular, the Stanford Research Institute, had been geared up especially to respond to just such novel developments in computer science. One of the institute's star researchers in fact had already been spending time developing a new hypermedia system known as NLS, the oNLine System.

The Stanford Industrial Park further added to Silicon Valley's structural preparedness. By the time of the ARPAnet's launch, the park was being managed to serve as a base for companies whose presence would bolster the research capabilities of Stanford University. The park's tenants would come to act as critical conduits for broadening work on promising new technologies like network computing.

Emblematic of the park's strength as a technology magnet and incubator was its selection by Xerox to be home to the now fabled Palo Alto Research Center (PARC). Xerox, then the world's dominant producer of document-copying equipment, intended PARC to help the company identify the competitive threats that emerging computer technologies might pose – one of which was networked computing. Robert Taylor, the ARPAnet's guiding force, was recruited for PARC, and he in turn brought in computer-communications experts whom he had known from the ARPAnet project.

New PARC employees also included Robert Metcalfe, a former ARPAnet engineer

from Harvard (and quipper of the line "Silicon Valley is the only place on earth not trying to figure out how to become Silicon Valley"). Metcalfe later left PARC to establish 3Com, which commercialized a local area network technology, Ethernet, making it the Valley's first major dedicated computer networking company.

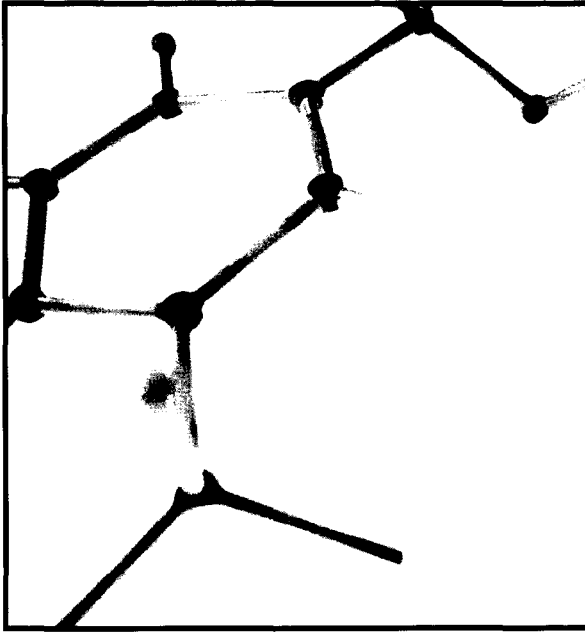
Important Valley firms like Apple and software maker Adobe sped the development of personal computing and computer networking through the integration of key PARC inventions with their own products. PARC's network experiments inspired the design of Internet protocol-enabled computer workstations, which became the core product of another major Silicon Valley firm, Sun Microsystems. On the heels of Sun's founding there emerged Cisco Systems (today the Valley's third-largest firm), a company that symbolizes the Valley's rapid rise as a center of Internet technology. Cisco is the first enterprise from the cluster to gain prominence by making network routers – the meta-technology that links networks to other networks, making today's Internet possible.

The Solectron Behind the Cisco

The way in which the Valley acquired and built upon its commanding lead in Internet technologies is but one example of how the region's specially developed infrastructure, dedication to innovation and managerial acumen have allowed the cluster to succeed time and again. They have underpinned the Valley's ability to dominate numerous other major technologies – defense electronics, semiconductors and personal computer equipment being but some of the better-known ones – that originated elsewhere. They are a cornerstone of the cluster's economic dynamism.

At the same time, it is obvious to anyone who witnessed the meteoric rise and precipi-

tous fall of Internet-related businesses that what was once an undervalued technology space became overvalued to ludicrous extremes. Here, too, Silicon Valley played a unique and disproportionately large role. And it is now the pain of the bust following the



Internet boom that has made pessimistic appraisals of the Valley so fashionable.

Once again, a look beneath the surface shows where the cluster's enduring strengths lie. Take the example of Cisco, a company that more than any other came to stand for the cluster's acquired prowess in Internet technologies.

Cisco's behavior during the Internet boom offers a parable for how the Valley's enthusiasm for networking had overreached. Shortly after the firm's market capitalization had peaked at half a trillion dollars in the spring of 2000, it became apparent that the bubble Cisco was riding was losing air. By the summer of 2000, the financial health of dot-com and telecommunications businesses that

formed the foundation of the company's customer base was in deep decline. Demand for Cisco equipment fell while the company's suppliers and manufacturing partners began warning that back orders were evaporating. Yet Cisco plowed forward, heedless of these warning signs.

The company's expectations were based in part on data provided by its own order network. Management stood by overly optimistic projections even as inventories swelled. Then in April 2001, barely a year after Cisco's historic market peak, reality hit. The company wrote off \$2.5 billion in inventory and laid off 16 percent of its work force.

Bubbles are nothing new to the Valley. Memory chips, PCs and hard-disk drives have all ridden wild cycles. And while no company can hold back a tsunami, well-managed ones can stay ahead of the wave. Indeed, more strategically managed firms are plentiful in the

Valley – though their numbers seem to be diluted during the boom times. One can even find companies among Cisco's network of local partners that exhibited sustainable management practices during the latest high-tech bubble. Soletron, a contract manufacturer for Cisco, offers a telling case in point.

Soletron is largely unknown to the public at large because it produces nothing under its own label. But, despite its anonymity, Soletron is immensely important to the region's economy and the global technology sectors it serves. When big-name firms were grabbing headlines at the height of the Internet bubble, Soletron had quietly amassed \$19 billion in annual sales and employed 65,000 people worldwide – making it bigger

than Valley icons like Sun, Oracle and Apple.

Solectron, founded in 1977 by a former manager at the video-gamemaker Atari, began life handling overflow work from local electronics manufacturers. The company struggled in its early years and was rescued



from collapse by Winston Chen, a physicist who had worked at IBM and bought a 50 percent stake in the struggling firm.

Chen implemented stringent quality-control production standards, an initiative backed by intensive work force training and the use of advanced automation equipment. This high-end approach set Solectron apart from a contract-manufacturing industry that had a pervasive image as a locus for sweatshops.

In 1987, Chen recruited Koichi Nishimura, his former boss at IBM, to join Solectron as chief operating officer. Nishimura, a second-generation Japanese-American, shared Chen's admiration for Japanese production methods. In 1991, Solectron won the coveted Malcolm Baldrige National Quality Award. The honor provided a major boost to Solectron's standing in the marketplace, helping to dispel the dreary image imparted by the industry in which it operated.

Under Nishimura, Solectron has made the transition from a regional contract manufacturer to a global manufacturing-services provider. It has absorbed some 30 facilities from key clients, including those of IBM, Hewlett Packard, Texas Instruments, Philips, Mitsubishi Electric and Sony. Instead of taking a hatchet to acquired plants, Solectron invests in both facilities and employees. The company retains managers, who are given free reign in integrating operations with Solectron's existing structure.

In day-to-day operations, rank-and-file employees are likewise given unusual independence. For example, frontline workers are expected to respond to developing issues without going through committees, allowing

BORUCKI/PHOTONICA

**Dot-com mania was fueled by the assumption that the
It was as if the right URL address alone**

the firm to address problems before they become crises. Despite operating at the low end of the Valley's supply chain, the company maintains an empowered and entrepreneurial work force. It is firms like Solelectron that give the cluster its resilience.

The Bedrock of Venture Capital

Of course, the irrational exuberance that so characterized the later years of the Internet boom had less to do with technology than with money. It was not the region's technology that spun out of control, but the prices of the region's stocks. Though many parties played parts in inflating the bubble, the leading contributors to the frenzy were Silicon Valley's unique breed of financiers: the venture capitalists.

To Valley venture capitalists, "the Internet changes everything," became a religious mantra – one that quickly spread through the global investment community. In 1997, *BusinessWeek* reported that, on average, a Valley company would go public every five days, minting 62 new millionaires *each day* in the process. With the money bubbling up, the region, in the words of the social critic Michael Lewis, "seemed more like Wall Street than Wall Street."

The Valley's venture capital community worked hard to whip up the fervor. John Doerr, the venture capitalist supreme, traveled the globe to proclaim that the age of e-commerce promised unstoppable exponential growth. The title of Doerr's standard PowerPoint presentation, "It's Possible That the Net Has Been Underhyped," speaks for itself.

There is little, if any, reason to be charita-

ble in assessing the financial excesses of dot-com mania or the role of the Valley's venture capitalist community in catalyzing it. Yet looking beyond the hyperbole that accompanied the bubble, the roots of the region's strengths in venture capital – and some of the seeds of the Valley's potential for recovery – can be discovered.

To understand how Silicon Valley emerged as a hotbed for venture capital investment, one must go back at least as far as the activities of Arthur Rock. Though he was not the cluster's first venture capitalist, Rock deserves much credit for establishing the Bay Area as a venture capital powerhouse. A New York-raised, Harvard-educated investment banker, Rock was introduced to the possibilities of funding high-technology enterprise in 1956, when he received a business plan for establishing a semiconductor manufacturer from Eugene Kleiner, a member of the unhappy management team at the Valley's very first semiconductor firm.

Excited by the plan's potential, Rock doggedly pursued more than two-dozen possible financiers before managing to secure Fairchild Camera and Instruments as a backer. After brokering the deal, Rock stayed in contact with the newly formed Fairchild Semiconductor management team, watching as the founders grew rich.

From New York, Rock also helped arrange a private placement for Teledyne, a Los Angeles-based technology company founded in 1960. Following those deals, Rock headed to San Francisco. Reflecting on the reasons for his move, Rock would later recall that, "the money wasn't there but the ideas were."

In 1961, at Rock's instigation, Thomas

**Internet had the power to create wealth automatically.
guaranteed that money would naturally pour in.**



Davis, the vice president of the Kern County Land Company, joined him in founding the venture capital limited partnership Davis & Rock. The firm's now seemingly modest \$3.5 million fund was raised from California's high-tech nouveau riche, including the satisfied beneficiaries of Rock's previous investment activities with Fairchild and Teledyne.

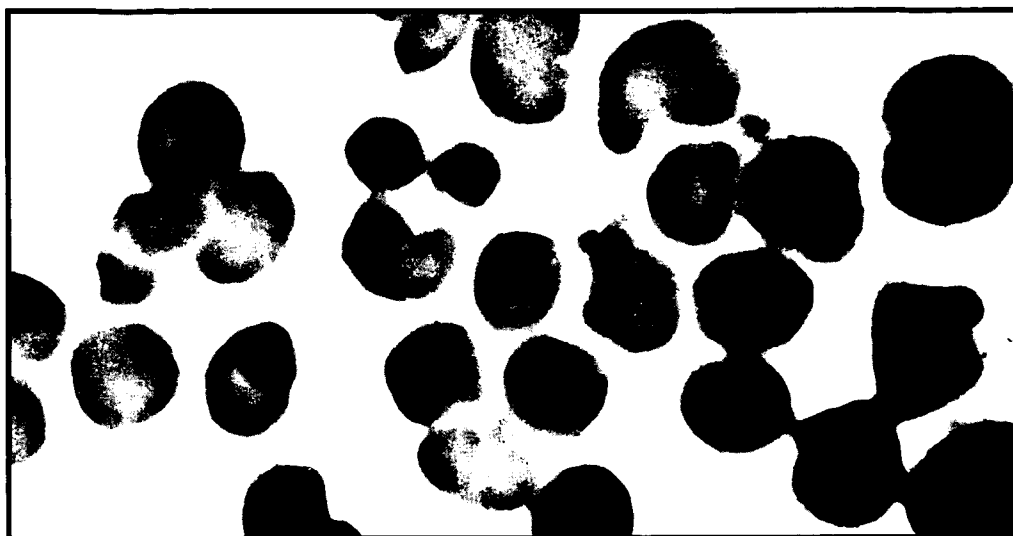
There were other risk-finance groups in the region, but none would experience Davis & Rock's success. For its first investment, the partnership put \$257,000 into a minicomputer start-up called Scientific Data Systems. When Xerox later purchased the firm, Davis and Rock's payoff was \$60 million.

Rock's prominence (his best known investment seeded Silicon Valley's largest semiconductor firm, Intel) helped him and similarly minded risk capitalists set a tone for investment strategy that guided the early years of venture capital in the region. Rock's rule of thumb, known simply as "the Principle" was: "back the right people." When interviewed, he commented, "I believe so strongly in people that I think talking to the individuals is much more important than finding out too much about what they do."

Davis & Rock's investment strategy contrasts markedly with what later came to guide VC money in the 1990s. The dot-com craze was often seen in humanist terms – a force democratizing information, building online communities, increasing opportunities for entrepreneurs. Yet dot-com mania's article of faith was that the technologies of the Internet essentially made human beings irrelevant. People became abstractions, recognized only as hits, clicks and eyeballs that propped up the preposterous market values of e-commerce plays.

Misconceptions about the human element led venture capitalists to assume that the sheer power of networking implied that supplicant e-business entrepreneurs would have to do little to satisfy customers' wants. In a similar vein, entrepreneurs were no longer expected to have any more involvement with their e-businesses than they had with the customers their businesses were designed to process.

This strategic weakness was compounded by too-easy access to cash. The size of venture capital funds grew rapidly, but the number of partners qualified to manage the investments



did not keep pace. With enormous amounts of money at their disposal and inadequate internal capacity to manage it, Valley venture capitalists stopped focusing on high-risk ventures and gave their attention to safer bets – previously financed companies seeking later-round funding, or start-ups that did not require managerial support.

In 1995, a well-subscribed fund might amount to \$250 million. By the start of 2000, multibillion-dollar funds were common. The mega-funds feasted on the Net, with its tailor-made, hypervalued, low-involvement technology. The general partners of such entities came to exemplify a new dominant breed of merchant venture capitalists in the Valley – savvy investors who are decoupled from the process of managing client firms. From hot-shot MBAs with glossy business plans (and little else) to well-known local serial entrepreneurs seeking to repeat past successes, these seemingly safe bets became the rage.

The concept of safe-bet Internet plays gained currency with the stellar IPO of Netscape, the Web browser maker. Before Netscape's 1995 public offering, new ventures in the Valley rarely attempted to go public

without at least four consecutive quarters of profits. Netscape had never been profitable. Yet the firm was led by a well-known serial entrepreneur, Jim Clark, and was being championed by no less a venture capitalist and pitchman than John Doerr.

Netscape's IPO numbers show just how much the new calculus of venture capital had taken hold of investor sentiment. Demand pushed the underwriters to move their offering price from \$12 a share to \$28 – still well under the high of \$75 reached on the first day of trading. The profitless enterprise emerged with a market capitalization of more than \$2 billion, turning Clark into a billionaire and giving Netscape's 24-year-old co-founder, the Web whiz kid Marc Andreessen, a net worth of \$80 million. John Doerr earned a mere 30-fold return on his investment.

One strength of venture capital in the Valley is the ability to learn from mistakes. Although the Netscape IPO did spark a boom and subsequent bust that wiped out much of the dot-com era's gains, there are already signs that more prescient venture capitalists have learned a fundamental lesson – namely the need to get back to the Valley's bedrock of

classic venture capital strategies.

Loudcloud, Netscape's high profile spinoff in 2001, hammers home the point. In spite of being founded by Andreessen and backed by the cream of local venture capital funds, Loudcloud went public with a market cap of just one-third the figure anticipated. A year later, the company was merged into oblivion.

A number of Valley venture capitalists have taken such events as the rationale for

neur when he did Netscape. We want Marc Andreessen when he's at [university], in jeans and sneakers thinking about doing [Web browsers], not later when he's got an Armani suit and pitching Loudcloud at a \$200 million pre-money valuation.

While the cluster may periodically become caught up in its own hype, there is no indication that the Valley's entrepreneurial creativity and genuine vision has been lost. It is this depth and substance that is sure to carry the cluster forward.



SILICON FEN

As noted earlier, the sheer exuberance of Silicon Valley makes efforts to characterize the dynamics of the cluster a challenge. In the case of Europe's Silicon Fen, the dance is no less difficult to decipher – but for the opposite reason. Understanding the defining characteristics of Silicon Valley requires one to peer through a blur; comprehending the defining traits of Silicon Fen demands that one look past it placidity.

The deceptively low-key qualities of the region are apparent as one drives across the southern, London-facing border of Cambridgeshire, near the heart of the cluster. There are no hulking corporate campuses or gleaming R&D facilities to see; the view on offer is a sweeping vista of rolling hills and farmland.

Nor, as one continues north along the M11, the region's fastest moving motorway, does the scenery perceptibly alter. Off to the left, you may spot the former Royal Air Force airfield at Duxford. It served as a training base for Frank Whittle, inventor of the jet turbine engine, who frequented the airfield in the 1930s as a member of the Cambridge University Air Squadron. Yet there is nothing to indicate that Whittle's technology had a last-

breaking from the merchant capital mindset. They are leaving the mega-funds behind, launching smaller scale investment vehicles that focus on entrepreneurial development and company building. Ruthann Quindlen, a former partner at a blue chip Valley venture capital firm, is among a group of rebels who articulates the new – or, more appropriately, renewed – thinking that is gaining ground. As she explained to *BusinessWeek Online*:

It's the first-time entrepreneurs that make the most successful companies. AOL was started by a first-time entrepreneur. Cisco. Microsoft. eBay. Excite. They do take more hand-holding, and it's more risky. But the reason they do better is they take more risk. They don't know how it's supposed to be. Marc Andreessen was a first-time entrepre-

ing impact on the economic vitality of the area. The only artifacts related to his work in high-tech is a collection of jet aircraft housed at Duxford as museum pieces.

Further on, you will pass by the ancient university town of Cambridge. Apart from the spires off in the distance to the right, there is little to catch one's eye. Someone familiar with the area might recognize the outlines of the Addenbrooke's Hospital site, home to Cambridge's storied Laboratory of Molecular Biology, or the tent-like structure that houses the Schlumberger Research Center. Other than these unobtrusive landmarks, there is little to indicate that you have entered a territory the *Financial Times* proclaims to be "the heart of a New Britain" – the place Prime Minister Tony Blair believes has "no reason" not to be able "beat Silicon Valley."

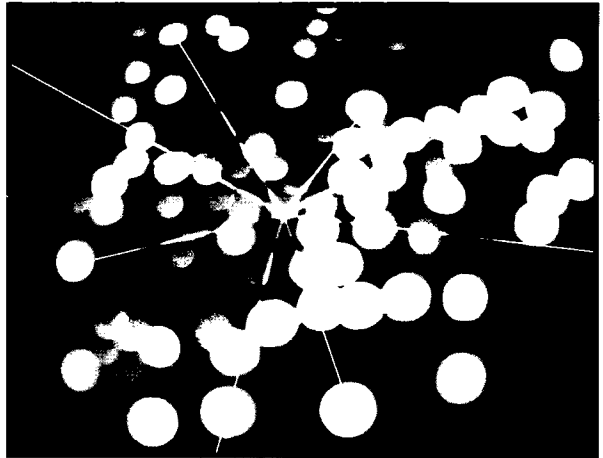
While such claims may be exaggerated, they are not without foundation. Silicon Fen (better known locally as "the Cambridge Phenomenon") represents Europe's most vibrant region for entrepreneurial driven high-technology business.

Some 86 percent of the region's technology firms are homegrown. The cluster thrives on small- to medium-sized enterprises; fewer than 3 percent of its 1,400 high-tech businesses employ more than 200 people. Most of the fens' 40,000-strong high-tech labor force works for companies that did not even exist 20 years ago. Unlike the staid, large-corporation-dominated technology districts of other parts of the British Isles and the continent, the Cambridge Phenomenon is remarkable for its indigenous, continually replenishing base of entrepreneurial high-tech firms.

At the same time, the lack of large firms in Silicon Fen raises important questions. Where are the equivalents of Solectron or Cisco? Why has the cluster not attained greater eco-

nomic mass? A region with 1,400 high-tech firms employing 40,000 workers is impressive by European standards. But Cambridge's statistics pale in comparison to the Silicon Valley's 8,000 technology-related firms, which employ over 400,000.

This state of affairs also contradicts the corollary to increasing-returns theory in economics that claims historical first-mover advantage determines the success of a region.



Cambridge, after all, has enjoyed an unrivalled first-mover lead in science and technology since the time of Isaac Newton. The fens were home to Cambridge University-affiliated technology firms before the universities of Stanford and Berkeley, the key educational institutions of Silicon Valley, had even been established.

Although there are many reasons for the disparity between the Valley and the Fen, many of the most important ones are linked to differences in government policy. Tony Blair may sing the praises of Cambridge entrepreneurs today, but when Frank Whittle long ago attempted to commercialize his jet engine technology, Whitehall forbade it and handed the technology to defense contractors better known to the British establishment

Moreover, though Britain's national government has since changed its tune, even today it does very little to catalyze new enterprise. And the attitude of the local government has evolved even less. Cambridge's local political structure is deeply hostile to economic growth – a position from which it has not budged in half a century.

The practices guiding Cambridge's commercial enterprises also differ radically from the management styles found in the Valley. For, despite the rhetoric, Cambridge entrepreneurs in general are not intent on creating the next Silicon Valley. Instead, they are content with reinforcing the Cambridge Phenomenon, avoiding comparisons with its American counterpart even though it shares its key dynamics and staying power.

The important thing to bear in mind when examining a region such as Silicon Fen – or any patch of Siliconia outside of the Valley – is the need to appreciate the cluster for how it has succeeded or failed on its own terms, which in many ways are distinct from Silicon Valley's.

Holding Back Growth

Although Cambridge has a well-established tradition for advancing the frontiers of scientific knowledge, progress and modernization in an economic sense have not been openly embraced. Modern industrialization in the area began around the middle of the 19th century. The combination of rail transportation (whose introduction was strenuously fought by the university administration), educational reforms and population growth were key to the region's rise as a home to technology-based industries. By the early 20th century, fen-land companies had developed thriving sectors of scientific instruments, electrical and wireless products, and chemicals.

Despite what would, by most standards, be considered positive change – solid but not runaway economic growth, accompanied by the creation of an advanced industrial base – the Cambridge establishment did not welcome the transformations that accompanied such industrial development. Not long after the conclusion of World War II, university and local authorities formed a government committee chaired by one of the foremost authorities on town planning, Prof. William Holford. His committee was the harbinger of a highly conservative vision, later known as the Holford Principles, which has served as a prescriptive guide for local planning policy ever since.

As laid out in what came to be known as the Holford Report, the principles for the future development of Cambridge entailed limiting all manner of growth: population, building, business and especially anything remotely resembling industrial activity. Holford took specific aim at the high-tech sectors – what the study refers to as “go-ahead scientific industries” – and considered them to be the most likely source of overall growth “unless active measures stop this happening.”

The resulting growth caps at first caused little concern among the area's technology community. Within a decade, however, disquiet arose about the way in which all forms of technology activity, even pure research and development work, were being pushed out by the stringent antigrowth regime. At a time when Silicon Valley was drawing in firms, entrepreneurs and leading-edge technologies, Cambridge's high-tech base was being eroded by policy fiat.

Over time, more progressive forces have found ways to modify the restrictions laid out by Holford. As an encompassing strategy, however, the Holford Principles still drive general planning objectives and policy at the

local level. To this baseline of locally imposed limitations, nationally originated structures and norms provide added challenges to Silicon Fen entrepreneurs.

In the area of financial mechanisms and policies, for example, British technopreneurs must contend with a mixed bag of factors that both spur and restrict firm formation and growth. With venture capital investments approaching 8 billion euros, Britain has the largest and most developed market for venture capital outside the United States. But most of this should be classified as merchant venture capital. A Bank of England study found that high-risk venture capital investments comprised only 1 percent of all venture capital funding. Investments in early-stage technology firms fared even worse, accounting “for only a part of this already small total.” As a percentage of GDP, the United Kingdom invest just one-third as much in venture capital as the United States.

For entrepreneurs fortunate enough to secure risk-capital funding, taking their companies public presents another set of obstacles. Although since the 1980s the United Kingdom has introduced second-tier markets designed to ease the listing of small firms, liquidity for the shares of smaller companies remains poor. Despite the introduction of new equity markets, other fundamental changes in institutional investor behavior means that for small-cap firms, the cost of capital has actually been increased.

Add other difficulties to the brew – for instance, the lack of a pan-European (as opposed to nationally based) stock market comparable in scale to the Nasdaq of the United States. Europe’s first such exchange, Easdaq, only came into existence in 1996 – a full 25 years after its American namesake. Even in the pre-crash heyday of technology stocks in 2000, Easdaq listed slightly more

While Silicon Valley is best conceived as a state of mind, Silicon Fen is best pondered as a riddle.

than 60 companies with a combined market capitalization of €30 billion (\$28 billion); Nasdaq listed over 5,000 companies with a capitalization of \$4 trillion. The exchange did so poorly that it had to be rescued after only two years – and bought out by Nasdaq.

Beyond the constraints imposed by political and financial regimes, the social norms that influence entrepreneurial behavior in Cambridge also serve to restrain the capitalist impulse. In England, or more precisely, in Cambridge, the general expectation is for individuals to simply get on with things when it comes to developing new product ideas or business concepts. Cliquish networking among one’s own social set is practiced as a fine art, but schmoozing with strangers to talk up a business plan is considered gauche (and, under Britain’s securities laws, can even be illegal).

One study found that only one-third of biotech firms in the greater Cambridgeshire region considered linkages with local customers, suppliers, and the like to be critical or very important. In fact, firms tend not just to be indifferent to such local connections; the largest percentages actually viewed local connections to be unimportant or of very little significance. Whereas the feeling in Silicon Valley is that corporate, personal and even technological networks are vital aspects of business life, Silicon Fen is infused with the



opposite sentiment – the natural way to do things is as independently as possible.

This go-it-alone attitude also reflects lower expectations for company growth. Cambridge's industrial landscape is dominated by small-scale companies that have no dreams of ever becoming a Cisco or an Intel. Although external factors undeniably contribute to this situation, most of the local population and business leadership seem largely content with this trade-off – one that allows the region to enjoy a more bucolic and slower pace of life.

The issue of class sensibilities, though perhaps overdiscussed when it comes to appreciating Britain's economic performance, cannot be ignored as a factor of entrepreneurial psychology and objectives, either. As the British political scientist Stephen Haseler succinctly makes the case:

The honors game of the royal state is more than a simple public recognition awards system. Rather, as well as reinforcing the country's peculiar sense of importance, it legitimizes ancient class sensibilities – and in the process sanctifies the idea that achievement is not enough. ... While captains of industry fall over themselves to be called "sir," and trade unionists and academics maneuver for peerages, the money made, the business created, the invention produced or

the book written assumes little value in itself. The ultimate prize is something much more precious: the medieval title, a position in an eternal social hierarchy, the opportunity to parade a kind of social apartness based on an illusion of nobility, or at least gentrification.

If nothing else, the honors system underscores a sense of capricious social stratification – anathema to the values that high-growth businesses use to motivate their managers and rank-and-file employees. While the scientifically minded technology enterprises of Silicon Fen might be more meritocratic than British corporations outside the cluster, they are certainly part of the larger social fabric.

Stirring the Fire

Against this backdrop, the efforts of Cambridge's high-tech community to create an at least moderately growth-oriented dynamic for their cluster are all the more impressive. The first concerted attempt at modifying the nearly draconian restrictions of the Holford Principles occurred in 1967. Prof. Neville Mott, Director of Cambridge's famed Cavendish Laboratory and a future Nobel laureate in physics, headed a committee to evaluate ways the university might benefit from increased interactions with the commercial



world. In the end, Mott's committee offered up a kind of compromise: it officially acknowledged the value of desirable small-scale commercial research activity in the region.

Though it represented an undeniable improvement over previous limitations, growth was capped at no more than an additional 2,000 high-tech workers. The figure warrants repeating: the maximum increase the Mott Committee proposed for the high-tech working population of Cambridge totaled a mere 2,000 people. It indicates how elements within the local establishment, no matter how much they might be open to change, were a long way from embracing a revolutionary transformation of the area.

What saved Silicon Fen from becoming a footnote in the history of Siliconia was not the modest adjustments recommended by the Mott Committee, but the local business leaders who decided to forge ahead with their own objectives for growth and development. Small though these advances may be when compared to the scale of Silicon Valley, they are – as the local nickname for the cluster intimates – phenomenal in their own ways.

Silicon Valley's enduring strengths come from such key factors as the preparedness of its institutions, robustness of its industrial base, and the vast capacity of its venture cap-

ital sector and other mechanisms that facilitate firm formation and growth. Silicon Fen must make do without the same quality of support structures. In spite of this, the cluster has been posting consistent and impressive growth since first being given the latitude to expand in the 1970s in the wake of the Mott Committee's recommendations.

From some 100 new technology firms that started up in Silicon Fen during that decade, by the mid-1980s their number had doubled and they were employing nearly 14,000. Today's cluster of some 40,000 workers has proceeded along an overall upward trend despite both the turbulence of technology markets and bouts of prolonged national recession.

Lacking large-scale firms – or for that matter any high-tech company that has been a major player in the cluster for an extended period – the resilience of the Cambridge Phenomenon is observable less from the makeup of its technology companies and more from the people and organizations who work there.

The earliest examples of a concerted effort to make Cambridge not only tolerant of high-tech expansion but also actually conducive to it occurred in the late 1970s with the establishment of the Cambridge Computer Group. This organization eventually folded with the

modern cluster's first recession in the mid-1980s, but was essentially revived when one of its leaders, Walter Herriot, led an initiative to establish an institution called the Innovation Centre.

Now, as director of the Innovation Centre, Herriot remains a key human resource of the cluster – one of the first people to whom aspiring entrepreneurs or incoming businesses turn to for advice and guidance. Although running a for-profit operation, much of the work he oversees is of a pro bono or public service nature. This includes supervising an equity-advisory program that assists some 250 small businesses a year.

Nigel Brown is another major figure in the current generation of Phenomenon business facilitators. Brown moved to the area in 1972, intending first to commute to London, where he had an established insurance brokerage business. Yet by the end of the 1970s, he recognized that the prosperity of the region offered its own set of opportunities. He relocated his firm to Cambridge and gradually expanded its range of financial services to include investment management and corporate finance.

By the 1990s, his company, NW Brown, had become a major financier of new business growth in Silicon Fen and the surrounding region. His business-angel investors' group, the Great Eastern Investment Forum, has raised more than €20 million to finance start-ups not only in the territory of the Phenomenon, but in other high-tech clusters throughout Europe.

Of all the leading enterprise facilitators in the Phenomenon today, the academic-turned-entrepreneur-turned-venture capitalist, Dr. Hermann Hauser, is by far the most prominent and influential. An easily identifiable role model for others, Hauser enthusiastically promotes the cluster and, running

against the grain of Cambridge's traditional culture, is a prolific networker. In addition to his professional activities, he frequently dedicates his time to enhancing the business climate of the region by promoting social interaction and working to raise the region's public profile.

Often referred to (albeit with a degree of journalistic license) as the father of Silicon Fen, Hauser is certainly the cluster's leading visionary. He is especially excited about the recyclable wealth the latest generation of firms is creating. As he observes:

Until two years ago, I was 50 percent of the business-angel money in Cambridge – not a very realistic situation – whereas over the next two years, with the money coming into the Cambridge area from options that people will cash in on, this will change things radically. This will be a bigger change than anything that has occurred in the past. There will be more money from these business angels going into the Cambridge region than any venture capital fund, than any government initiative, than any corporate funding. ... I'm delighted to say that Cambridge is really the first such region in Europe where this is happening quite to that extent. You need rich people to make these crazy investments and prepare the undergrowth of exciting new companies that the venture capital community then can grow into very large companies.

The recycling of capital that Hauser describes might well provide the necessary stimulus to take Silicon Fen to a new level in its development. Yet quite unlike Silicon Valley – where the greater threat to the steady pace of its growth comes from bouts of unsustainable euphoria – Silicon Fen must contend with the constrictions imposed on it by government authority and popular will. Money might pave the way to new heights for the cluster, but will hardly take it there. ■

Robert Prechter is regarded by Wall Street – not to mention the economics establishment – as an eccentric who should not be taken seriously. Yet on major market moves, Prechter's track record is impressive.

Prechter, who has been active as an investor and analyst since the 1970s, is far from the mainstream in market forecasting. He believes that market moves are governed by Elliott Waves, first described by Ralph Nelson Elliott (1871-1948), who is in many ways the godfather of what is now called technical financial analysis.

For many people, this is a big problem. Even the weak form of the efficient market hypothesis, which many people accept, states that technical analysis – the forecasting of stock or other prices through knowledge of past price movements – can't work. And whereas the efficient market hypothesis is on the whole rigorously derived from its underlying assumptions, the theoretical underpinning for Elliott is pretty shaky.

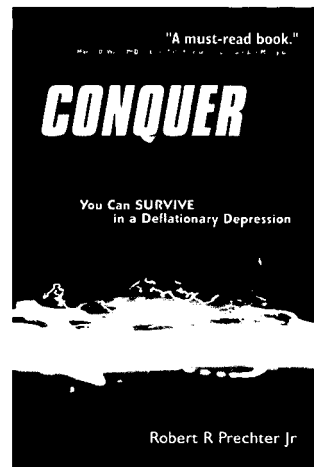
Prechter claims that Elliott understood that the stock market was "fractal" – similar in pattern when viewed at a wide range of scale. This can't be the literal truth, as the concept and word "fractal" was not coined until 1975

**Conquer the Crash:
You can Survive
and Prosper in a
Deflationary
Depression**

By Robert R. Prechter Jr.

John Wiley & Sons,
300 pp.
Cloth \$27.95

Reviewed by
Martin Hutchinson



(in Benoit Mandelbrot's book, *The Fractal Geometry of Nature*) – 27 years after Elliott's death. However, the fact that the Elliott Wave Theory is unproved and doesn't rest on the shoulders of intellectual giants doesn't make it false.

It is pretty clear that the stock market is both fractal and chaotic – that is, apparently random, but governed by deterministic laws. People have made money trading off both characteristics, which each negate the random walk theory that is part and parcel of the efficient market hypothesis.

A fractal, chaotic market is very likely to have some complex underlying "driver" – a mechanism governing major price movements that is born of interactions between

MARTIN HUTCHINSON is United Press International's business and economics editor. His review is printed here with permission from UPI.

BOOK REVIEW

fear, greed, economic reality and the passage of time. Elliott Waves, together with the qualitative explanation of the forces behind them provided by Elliott and Prechter, are one plausible such model, which appears to fit observed realities with considerable elegance. The efficient market hypothesis, by contrast, is analytically rigorous but not empirically verified.

It is, in part, an artifact of the early years of econometrics, in which economists sought to fit models into equations with well-understood mathematical properties, in spite of the fact that such mathematical forms represented only a modest fraction of the possible relationships that occur in nature. Only after 1970, with the introduction of “catastrophe theory” of Rene Thom, followed by Mandelbrot’s fractals and chaos theory, did economists come to realize that the simple equations they had studied in school did not adequately reflect reality.

MAKING WAVES

The Elliott Wave Theory states that financial markets move in a cycle consisting of a five-wave primary phase (three up, separated by two down), followed by a three-wave reaction (down-up-down), after which another primary trend begins. This pattern repeats itself at several scales, from short-term trading patterns to the overall market trend – thereby fulfilling the market’s overall fractal nature.

The waves differ in kind. Of the three upward phases the first is hesitant and the middle (Phase 3) is the strongest, while Phase 5 ends in an orgy of speculative excess. The first downward phase (Phase 2) ends when the market comes to believe that the overall trend is downward.

This fits the pattern since the bottom of the 1929-32 bear market, which, considering that

Elliott wrote in the 1940s, is fairly impressive. More impressive yet, at the beginning of the 1980s Prechter was forecasting a huge upward Elliott fifth wave ending in an era of speculative excess – which seems to be what actually occurred. He believes that the fifth wave peaked in March 2000 and that we are now in a downward “supercycle,” having ended the primary upward trend that began in 1932.

Prechter was mocked at various points in the last two decades, once for having forecast a further sharp market rise just before the 1987 crash and again because he predicted the imminent end of the fifth wave in his 1995 book, *At the Crest of the Tidal Wave*. To be fair, however, the Elliott Wave Theory does not claim to predict the timing or even the exact size of market moves – merely their general direction, type and sequence. The 1995 call was reasonable at the time; it simply did not account for the size of the 1996-2000 speculative blow-off.

Prechter has successfully predicted a number of features of recent markets. Most impressive is that the fifth wave, in spite of its enormous size, was far less wholehearted than the third wave in the Elliott cycle. This was forecast by Prechter in 1978 and validated by the extraordinary fact that in spite of the market’s huge rise since the late 1970s, the cumulative advance-decline line (number of shares rising, minus those declining each day) is almost flat in 1976-2000, with advances and declines being nearly evenly matched. In the third wave (1942-66), it was hugely positive.

Prechter spends only a small amount of time speculating on where the current downswing may take the market. But he concludes that, based on theory and past history, its most likely destination is within the 1970s’ fourth wave valuations – from 577 to 1,051 on the Dow Jones industrial average. This is much more bearish than my own prediction

of 5,000 for the Dow – or indeed than anyone else’s prediction for the market that I know of. It is not supportable by any reasonable valuation metric unless you believe that the share of profits in United States gross domestic product is going to fall catastrophically and stay there.

However, Prechter’s analysis, and the Elliott wave forms, must have been affected by the fact that index values in such a calculation should be deflated by the overall consumer price index or its equivalent. If that is done, then the 1966-82 bear market is much more impressive, dropping the Dow Jones index from 5,577 (at today’s prices) in 1966 to 1,440 in 1982. A final bottom for this bear market around the middle of that range – say 3,500 on the Dow – would be compatible with my own view, which is based on conventional valuation considerations.

Prechter also outlines his case for a severe deflation, arguing that we’re in for a credit deflation similar to that of Japan in the 1990s in which banks suffered huge bad debt write-offs and became inordinately conservative in their lending. He does not in my view make the case for a severe deflation in prices, because the ability of the Fed to, in effect, drop money from helicopters makes such a prolonged price deflation very unlikely.

Much more likely is a more severe version of the 1970s, with rising consumer prices but falling asset prices. Gold and real estate rose in price in the 1970s. In Prechter’s view, however, they are unlikely to do so this time around. As noted earlier, Prechter does not prove that we are at the beginning of a huge “supercycle” stock market and economic downturn. Nevertheless, his book provides significant evidence to bolster his case, as well as a substantial amount of good advice to follow if he is right. Stock market investors would do well to read it. 

Recent Books Worth a Close Look

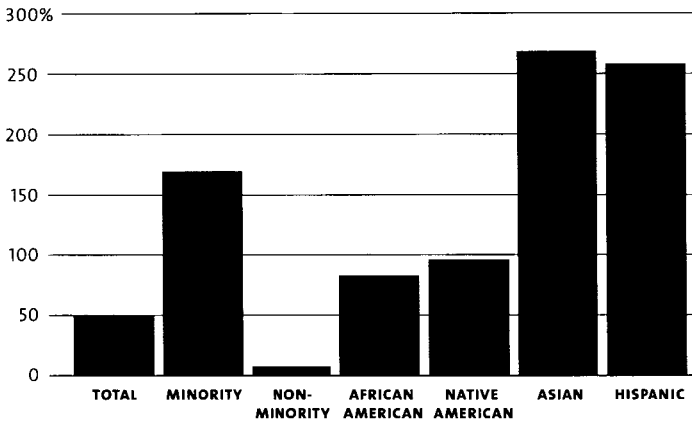
- *Free Trade Today*,
by Jagdish N. Bhagwati (Princeton)
- *The Chastening: Inside the Crisis that Rocked the Global Financial System and Humbled the IMF*,
by Paul Blustein (PublicAffairs)
- *Dot.con: The Greatest Story Ever Sold*,
by John Cassidy (HarperCollins)
- *Sex, Drugs & Economics*,
by Diane Coyle (Texere)
- *Who's Afraid of Adam Smith?
How the Market Got Its Soul*,
by Peter J. Dougherty (Wiley)
- *The Joy of Freedom: An Economist's Odyssey*,
by David R. Henderson
(Financial Times Prentice Hall)
- *Against the Dead Hand: The Uncertain Struggle for Global Capitalism*,
by Brink Lindsey (Wiley)
- *A Random Walk Down Wall Street, Completely Revised and Updated Edition*,
by Burton Gordon Malkiel
(WW Norton, forthcoming)
- *Wealth and Democracy:
A Political History of the American Rich*,
by Kevin Phillips (Broadway Books)
- *Best Business Crime Writing of the Year*,
by James Surowiecki (Vintage)
- *Fooled by Randomness: The Hidden Role of Chance in the Markets and in Life*,
by Nassim Nicholas Taleb (Texere)
- *Beyond Junk Bonds:
Expanding High Yield Markets*,
by Glenn Yago and Susanne Trimbath (Oxford)

BY GLENN YAGO AND BETSY ZEIDMAN

Creating an inclusive economy that reflects the United States' diverse demography has always been the right thing to do; today, it is the only thing to do.

THE EMERGING MARKETPLACE IN AMERICA 1995-2050

Percent Increase in Population



Since the heady days of the civil rights and women's movements, activists and business leaders have butted heads about social and economic justice. Both sides implicitly assumed that fairness was at odds with efficiency – that equity necessitated some sacrifice in productivity. Now we are coming to understand that bringing everyone into the fold doesn't compromise growth. Quite the contrary, it is the key to sustaining Americans'

GLENN YAGO is director of capital studies at the Milken Institute. BETSY ZEIDMAN heads the Institute's Center for Emerging Domestic Markets.

standard of living as the giant baby boom generation retires.

As a practical matter, gains in social equity turn on increasing opportunities for business ownership in what is coming to be known as "emerging domestic markets." And that turns on broadening access to capital, management talent and product markets.

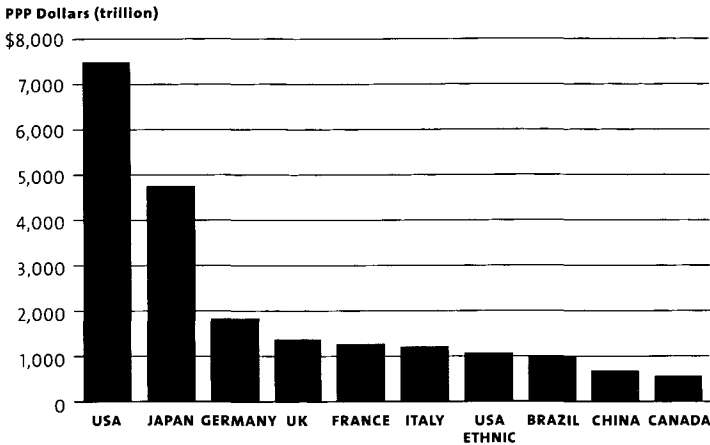
Over the past few years, the Milken Institute in conjunction with the U.S. Commerce Department's Minority Business Development Agency, the California state treasurer, state pension funds and private foundations, has quietly built the case for investing in emerging domestic markets – that is, in people, places or enterprises that have been undercapitalized because of race, ethnicity, gender or location. Eliminating barriers to opportunity has, of course, always been a good idea. Now, it is becoming prerequisite for strong economic growth.

Five phenomena will largely determine the American economy's success in coming decades, and all of them are linked to our ability to get the most from new sources of

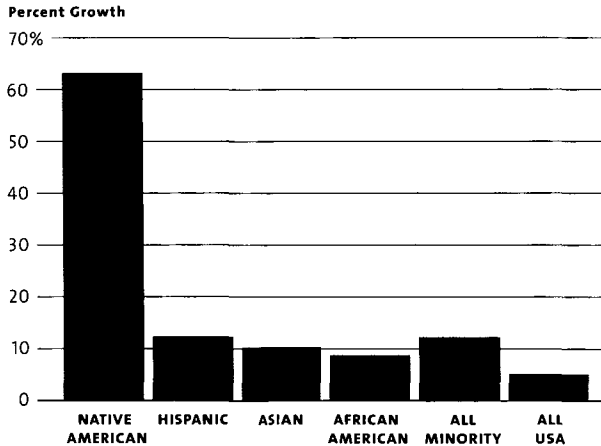


INSTITUTE VIEW

PURCHASING POWER OF ETHNIC MARKETS COMPARED WITH THE 10 LARGEST ECONOMIES



AVERAGE ANNUAL GROWTH RATES: EMERGING DOMESTIC MARKET FIRMS 1992-1997



labor and capital.

Demographic diversity. African-Americans, Latinos, Asians, Native Americans and other ethnic and immigrant groups will account for 90 percent of the 131 million people added to the United States population by mid-century. Last year, California became the

first state in which less than half of the residents were white. And 12 more of the nation's most populous states will follow California's

lead over the next 15 years. Already, ethnic and racial minorities represent a consumer spending base that is larger than all but six countries in the world. How much – as well as how efficiently – we invest in these groups will determine whether the United States will sustain its place as the model of political and economic democracy.

Labor supply constraints.

Since the 1970s, the rate of growth of the labor force has been ebbing – from 2.7 percent in the 1970s, to 1.6 percent in the 1980s, to between 1 and 1.5 percent today. Everything points to even lower rates over the next few decades. Thus, with 70 percent of increases in the work force coming from ethnic populations, the failure to integrate these groups into the broader business culture would sharply limit economic growth.

Entrepreneurial energy. Economic growth spurts have historically been triggered by waves of entrepreneurial innovation, which in turn have been triggered by demographic shifts. Each period of demographic change – the

westward movement of the mid-19th century, Western European immigration during the late 19th century, the Southern and Eastern European immigration of the early 20th century – yielded rich harvests of entrepreneurial talent that drove industrial expansion. There is good reason to believe that the current

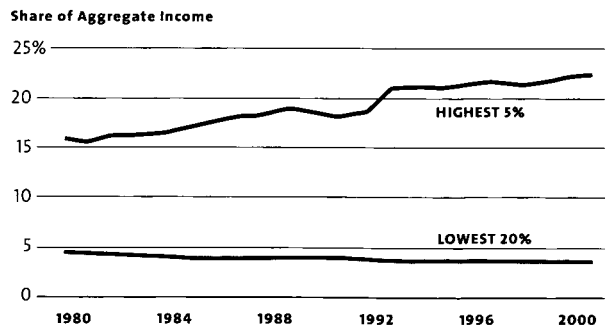


demographic wave will be equally productive, provided the new entrepreneurs have access to human and financial capital.

The minorities that constitute emerging domestic markets represent 27 percent of the population, but own only 15 percent of the nation's businesses. And those businesses generate just 6 percent of the sales. The case against investment myopia is even stronger when viewed from the perspective of women-owned businesses. Companies owned by women accounted for only 5 percent all businesses and about 1 percent of all sales 30 years ago. Today, women own 28 percent of all privately held firms and their businesses generate almost 10 percent of sales. In the last five years alone, the number of women-owned firms has grown at twice the rate of all companies, with employment increasing 30 percent.

Wealth and income polarization. In the last decade of the 20th century, the share of national income going to the top fifth of the

INCOME INEQUALITY IS GROWING

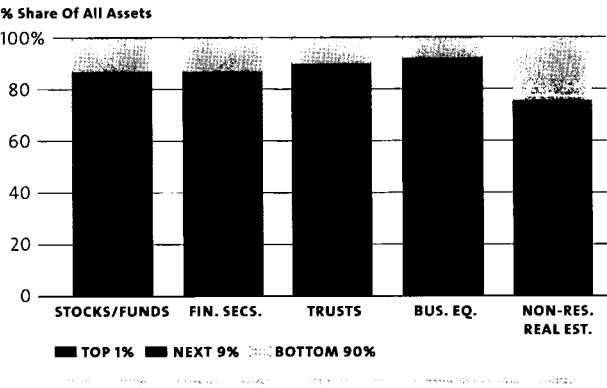


population expanded at a faster rate than any previous period of United States history since the Great Depression. Changes in the distribution of wealth have been even more extreme. Yet, limits on the government's ability to

INSTITUTE VIEW

redistribute income through tax and spending policies have long since been conceded by erstwhile champions of the poor. Hence, social justice now more than ever depends on gains in economic mobility through skills

THE HAVES AND HAVE-NOTS
HIGHLY CONCENTRATED INVESTMENT ASSET OWNERSHIP



DOMESTIC VS. INTERNATIONAL MARKETS

RISK FACTORS	EMERGING DOMESTIC MARKETS	EMERGING INTERNATIONAL MARKETS
Political Risks	NO	YES
Expropriation	NO	YES
Regime Volatility	NO	YES
Legal Contract	NO	YES
Currency Risk	NO	YES
Financial Risk	YES	YES

acquisition and individual enterprise.

Land constraints. Growth in urban markets – for both housing and commerce – requires significant amounts of land. Much of this demand could be met by using parcels located in emerging market neighborhoods. Roughly 25 percent of this overlooked property – urban infill skipped over during the suburban expansion of earlier decades – has adequate infrastructure, is close to metropolitan markets and, if amassed and developed,

could meet the needs of urban cores. This real estate thus creates a significant investment opportunity for those with patience and vision.

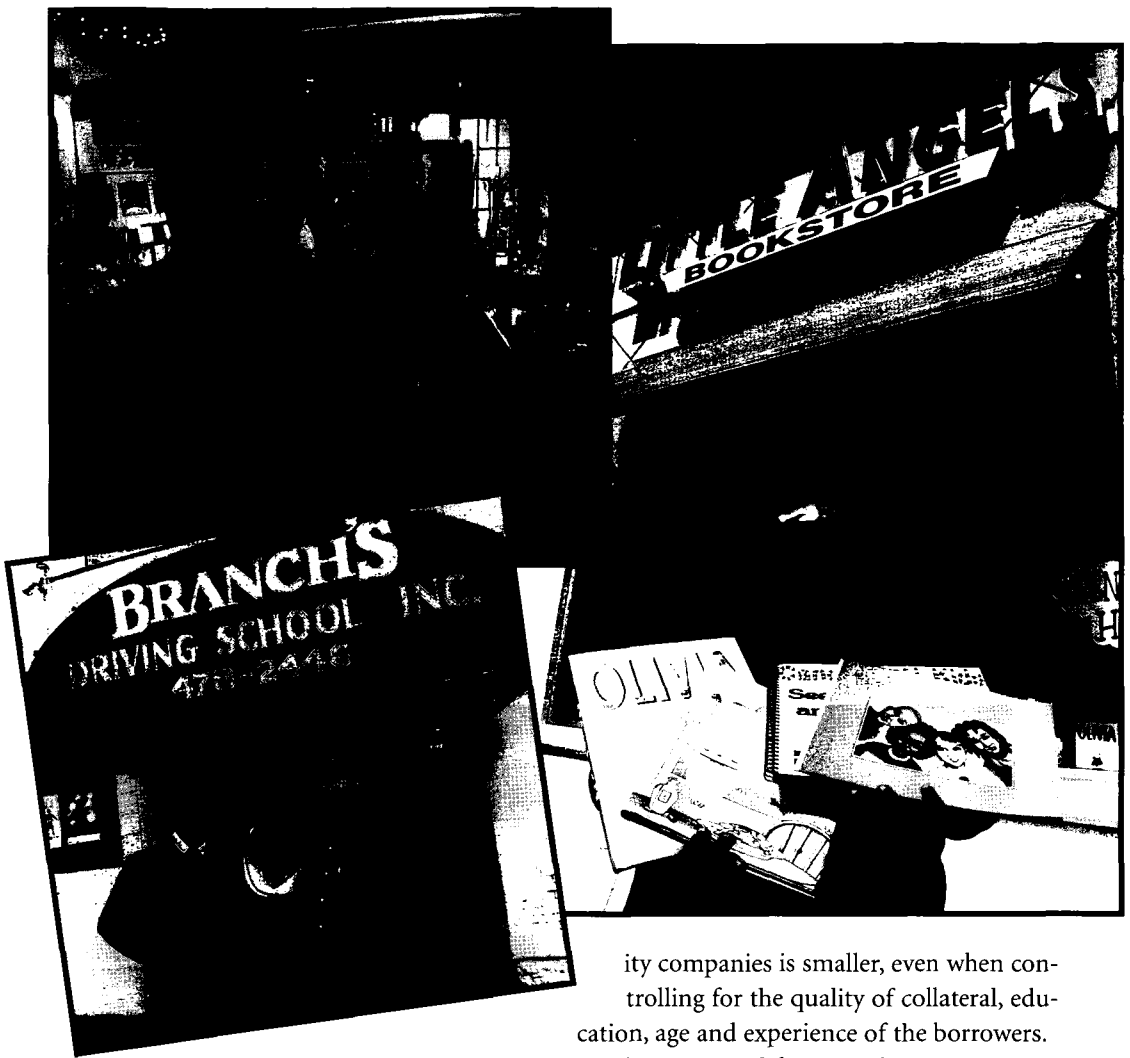
SPURRING DOMESTIC MARKETS

The case for doing well by doing good could hardly be stronger. Indeed, if pension funds and other institutional investors fail to channel Americans’ savings into emerging domestic markets (where risk factors are modest compared with foreign emerging markets) the United States economy will not be productive enough to cover the retirement of the baby boomers in the style which they have come to expect.

There is little question that minority entrepreneurs are capital constrained. Latino and African-American business owners are turned down for loans at far higher rates than white owners. Moreover, the black-to-white loan denial rate is 3.5 times greater in the small-business credit market than in the home mortgage market.

Women face similar problems. Despite the fact that they own close to 30 percent of all United States businesses, only 16 percent of women-owned companies have \$100,000 in bank credit (compared with 36 percent of male-owned companies), and 46 percent have less than \$50,000 (compared with only 34 percent among their male counterparts).

Emerging domestic market companies face continuing challenges in gaining access to the funds needed to grow. Some of these challenges are driven by powerful forces in the economy and affect virtually all small companies: high levels of debt that lead to tighter credit; the shift from a bank-based financial system to a securities-based system, which places new demands on businesses

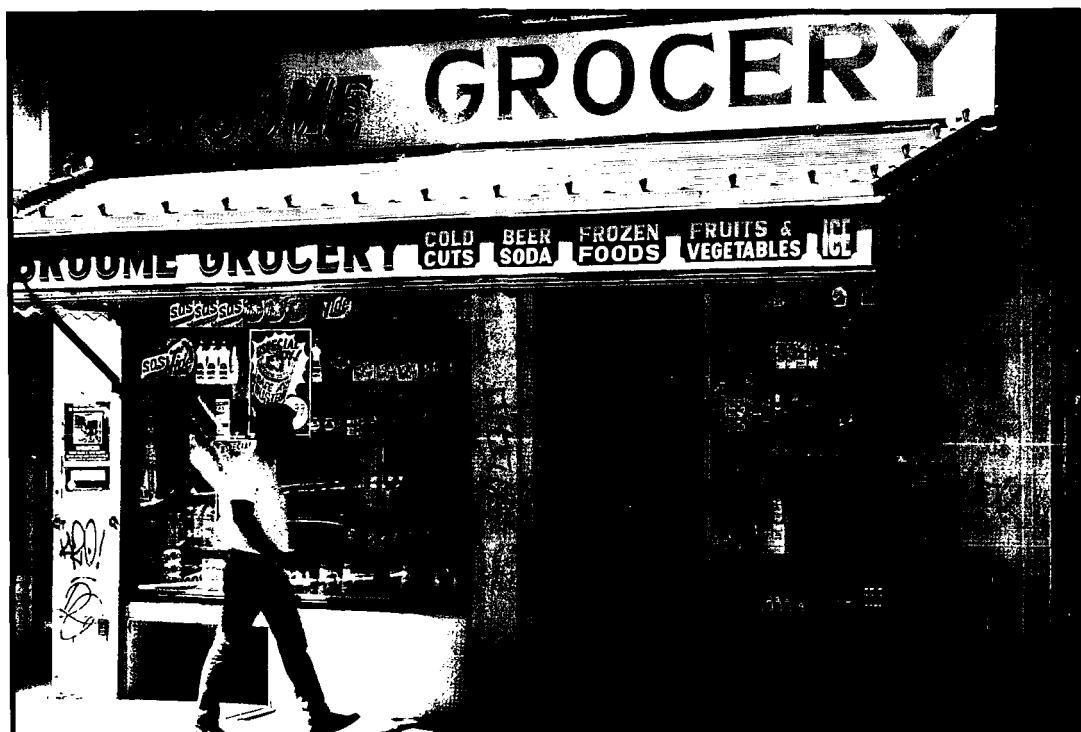


lacking financial sophistication; and consolidation of the banking industry, which increases reliance on score-based standardized lending and reduces the role of personal relationships between lender and borrower.

However, there is no doubt that emerging domestic market entrepreneurs face additional barriers. They receive only a small percentage of private equity investments, most likely because they lack relationships with individuals in positions to provide the resources. What's more, lenders are far more cautious in minority lending; the average size of commercial loans in minority areas and to minor-

ity companies is smaller, even when controlling for the quality of collateral, education, age and experience of the borrowers.

The success of the United States economy in recent decades is closely linked to the exceptional efficiency of the financial markets in supplying capital to high-risk, high-tech enterprises. It is important to achieve the same efficiency in directing capital to minority entrepreneurs. To manage this, we must address the information and data gaps in these markets, and we must adapt financing mechanisms that have worked well in the mainstream sectors. Partnerships involving government, business and nonprofit organizations can be extremely successful at leveraging resources and expertise, and facilitating the flow of capital.



Financial innovations fall into three broad categories:

- Systemic innovations that broadly affect the financial sector, such as securitization, corporation-bank-community lending partnerships, expanded receivable-based financing, and intermediary structures providing credit enhancement or mezzanine financing for entrepreneurial ventures.
- Products that better serve markets, such as new models for financing emerging businesses begun by the California Public Employees' Retirement System and the California State Teachers' Retirement System (through private equity programs aimed at underserved communities) and the Bay Area Council (though its Family of Funds, addressing smart growth, environmental restoration and small businesses generating "double bottom lines").
- New business processes, such as networks to

collect reliable data on emerging domestic market businesses, and credit-scoring models applicable to entrepreneurs lacking traditional bank histories.

Among the most promising of these innovations is securitization of small business loans, which enables institutional investors to enter the market and allows America's remarkably efficient fixed income securities markets to work their magic. Moreover, by using innovative "credit enhancement" vehicles like foundation grants and government guarantees, riskier community development loans can be pooled and securitized.

Developing reliable data on emerging domestic market businesses and their loan performance is critical to increasing access to capital that will allow these enterprises to meet their potential. We are convinced that government-business-foundation collaborations can significantly advance this effort. **M**

rites of Spring

This year's Milken Institute Global Conference is scheduled for March 31-April 2, 2003 at the Beverly Hilton Hotel in Los Angeles. Speakers include senior executives from major corporations, analysts from leading financial firms, senior public policy officials, academic experts – and, of course, panel discussions featuring Nobel laureates and Michael Milken. For more information visit www.milkeninstitute.org/gc2003, or contact us by phone (310-570-4605) or by e-mail (conferences@milkeninstitute.org).

Web Magic

The Milken Institute has redesigned its Web site. Check out the easier navigation tools and the events calendar, as well as the research summaries. Feedback always welcome (info@milkeninstitute.org).

Milken to Ford on EDM

Glenn Yago, Betsy Zeidman and Bill Schmidt's new report for the Ford Foundation, *Creating Capital, Jobs and Wealth in Emerging Domestic Markets: Using Innovative Financial Technologies to Grow Small Businesses in Low-Income Communities*, is available online at www.milkeninstitute.org.

You Go, Girl

Springboard Enterprises hosted a workshop at the Milken Institute in December as part of its nationwide series to showcase women-led

New Publications

- *Beyond Junk Bonds: Expanding High-Yield Markets* (Oxford University Press), by Glenn Yago and Susanne Trimbath, is a follow-up to Yago's 1991 book, *Junk Bonds: How High-Yield Securities Restructured Corporate America*.
- *Clusters of Creativity* (Wiley) by Rob Koepp, compares Silicon Valley to England's Silicon Fen. An excerpt can be found on page 65.
- *The Bridge to a Global Middle Class* (Kluwer), edited by Walter Russell Mead and Sherle R. Schwenninger. This fourth book in the Milken Institute Series on Financial Innovation and Economic Growth links economic development to the nurture of the middle class.
- *The Foreign Conquest of Latin American Banking*, by James Barth, Triphon Phumiwasana and Glenn Yago, documents changes in the banking markets of Latin America generated by the penetration of foreign firms.
- *Globalization of the World Economy: Potential Benefits and Costs and a Net Assessment*, by Michael D. Intriligator, examines the pros and cons of globalization.

businesses seeking capital. The program, which brought together some 50 women entrepreneurs and local business people, included a talk by Katrina Garnett, founder of CrossWorlds Software, as well as a "fast pitch" session highlighting four local entrepreneurs.

Ring Out the Old

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In this issue

JEFFREY FRANKEL

On why the Republicans and Democrats have reversed roles.
Is ideology just another word for interest group politics?

JIM DELONG

On the real stakes in the fight over stock option accounting.
The Old Economy fights back.

**CAROL GRAHAM, ROBERT LITAN
AND SANDIP SUKHTANKAR**

On the true cost of corporate sleaze.
We're talking tens of billions, here.

GARY HUFBAUER

On the threat from global income polarization.
Duck and cover.

LARRY KOTLIKOFF

On the broadband mess.
Technology could still trump political logrolling.

RICARDO BAYON

On the new institutional shareholder activism.
Pensioners take on global warming.

ROB KOEPP

On what makes technology clusters work.
The rise of Silicon Valley was no accident.

Quick: What's the second largest economy in the world? What country has the highest per capita income? Yes, both are trick questions since the answers depend on how you measure output. The standard (and far easier) way uses currency exchange rates to compare output priced in dollars, yen, euros, drachmas, etc. The more useful way adjusts exchange rates for what currencies can actually buy, and thus says a lot more about productivity and living standards.



COUNTRY	2000 INCOME \$BILLIONS AT CURRENT EXCHANGE RATE	2000 INCOME AT \$BILLIONS PPP	PER CAPITA INCOME AT EXCHANGE RATE	PER CAPITA INCOME AT PPP
Argentina	276	446	7,500	12,100
Azerbaijan	5	22	600	2,700
Bangladesh	48	209	400	1,600
Brazil	610	1243	3,600	7,300
Burundi	1	4	100	600
Cambodia	3	17	260	1,400
Chile	70	138	4,600	9,100
China	1,063	4,952	800	3,900
Hong Kong	176	174	25,900	25,600
Costa Rica	15	30	3,800	8,000
Czech Republic	54	142	5,300	13,800
Egypt	95	235	1,500	3,700
Germany	2,064	2,047	25,100	24,900
India	455	2,375	500	2,300
Iran	107	376	1,700	5,900
Israel	104	121	16,700	19,300
Japan	4,519	3,436	35,600	27,100
South Korea	421	818	8,900	17,300
Mexico	497	861	5,100	8,800
New Zealand	50	71	13,000	18,500
Nicaragua	2.1	11	400	2,100
Norway	155	133	34,500	29,600
Russia	241	1,165	1,700	8,000
Saudi Arabia	150	236	7,200	11,400
South Africa	129	392	3,000	9,200
Switzerland	274	219	38,100	30,500
Thailand	122	384	2,000	6,300
UK	1,460	1,407	24,400	23,600
USA	9,602	9,602	34,100	34,100
Vietnam	30	157	400	2,000